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VOL. 5. No. 4 OCTOBER 1944

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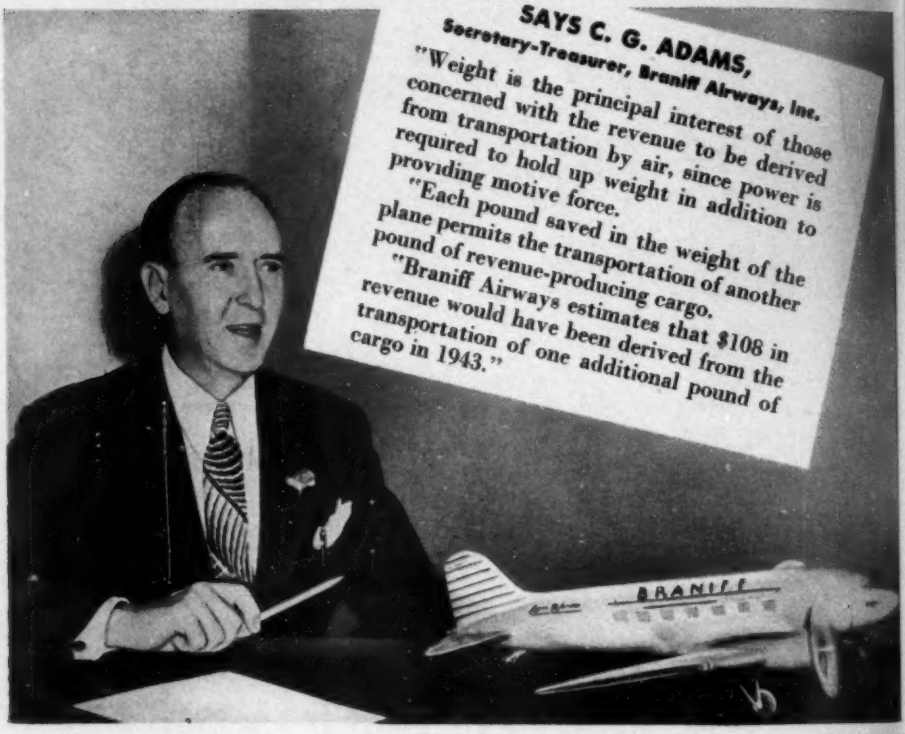

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Vol. 5
No. 4

AIR TRANSPORTATION

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October
1944

FEATURES

NEWS

DEPARTMENTS

THE COVER—In majestic flight are a pair of Curtiss Commandos, recognized as the world's largest twin-engine plane. An important arm of the United States Army Air Force, these Commando transports will soon make their debut in airline service.

JOHN F. BUDD, *Editor and Publisher*

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A Few Plain Words On Our Second Birthday

JUST one year ago an editorial entitled, *One Down—Plenty More to Go,* capped the first birthday of AIR TRANSPORTATION.

With this issue, another year of outstanding reporting service in the field of air transportation—freight and passenger—has been wound up with the fullest measure of success.

We of AIR TRANSPORTATION are singularly proud of the high position which the magazine has reached in the field of air literature. It is our satisfaction that AIR TRANSPORTATION was the first periodical issued in the interest of the shipper who must turn to the sky if he would keep abreast of the times. We feel further complimented that several periodicals, based on the style and purpose of the pioneer, AIR TRANSPORTATION, have mushroomed.

"Let's look at the record!" the late Alfred E. Smith used to say—and thus we proudly point to the steady rise in circulation and advertising volume in our lusty two-year-old.

Plainly, this is our day for boasting, and we do so in the firm knowledge that AIR TRANSPORTATION has become, in the short period of two years, as much a part of the field of air commerce as the fuselage is of a plane.

For 24 consecutive issues AIR TRANSPORTATON magazine has posed vital questions on the subject of national and international air commerce; brought to many thousands of readers of distinctive taste who, incidentally, are in key positions in the shipping industry and transportation field, the pronouncements of leaders in aerial trade and progress; and lent its pages to careful studies of the all-important problems facing air trade —difficulties which, to some extent, are being met and overcome by clear discussion in this magazine.

AIR TRANSPORTATION has but one prejudice: it believes in the airplane as among the first-rank cargo- and passenger-carriers of the postwar world; it also believes that its increased use as an international cargo-plane and passenger airliner will be the most important single force in spreading democracy and its meaning to every corner of the earth.

In two years AIR TRANSPORTATION has become a vital force recognized by business leaders in the United States and Canada. Now as we enter into our third year, we do so with the avowed intent to dwarf all of this periodical's accomplishments, however great they have been; and to work ceaselessly towards the establishment of a national consciousness that Tomorrow's world of trade and travel will be in the air.

John F. Budd

EDITOR & PUBLISHER,
AIR TRANSPORTATION

THE AIR TRANSPORT PICTURE IN ITS ENTIRETY

How much business will international air transport bring? How will the development of this type of transport affect individual ports? What can the ports do to maintain their position in air trade? The author presents a careful picture no one can afford to miss reading.

By WILLIAM A. M. BURDEN

Assistant Secretary of Commerce for Air, U. S. Department of Commerce

IN November there will gather in this country the representatives of 55 nations, convened at the invitation of the United States to chart a path for international aviation. A fortnight after this assembly, Congress will resume its session and will have before it, among other matters, a report from the Secretary of Commerce proposing a billion-dollar airport program to meet our national needs for ground facilities over the next 10 years. Quite evidently, aviation is moving "front and center" on the stage of history.

A number of Port Authorities have been making an intensive study of aviation for several years. A few are actually operating airports for both domestic and international traffic. But to many the field is a new one.

The economic and quasi-judicial functions of the Federal Government in relation to air transportation are carried out by the Civil Aeronautics Board, a five-man body appointed by the President, of which L. Welch Pogue is Chairman. The board, which has some 300 employees, is responsible for granting certificates of convenience and necessity for new routes, both international and domestic. It establishes the rates which the airlines are paid for carrying mail—rates which on the light traffic routes may include varying amounts of subsidy. It is also responsible for laying down safety rules and standards which pilots and aircraft must meet.

The Civil Aeronautics Administration, which is a part of the Department of Commerce, is the government's technical operating agency in the field of civil aeronautics. It is responsible for the promotion of civil aviation as well as for the application of the regulations laid down by the Board. The Administration is headed by the Administrator of Civil Aeronautics, T. P. Wright (see Page 16 of this issue), and is under the supervision of the Secretary of Commerce through the Assistant Secretary, myself. Some 7,000 of its 11,000 employees are engaged in building and operating our nation-wide Federal Airways System of radio ranges, lights, and landing fields. CAA is the Federal agency responsible for airport construction, and in recent years all Federal appropriations for civil airports have been made to that agency. It also provides municipalities with technical advice on airport matters through its eight regional offices.

Responsibility of CAA

CAA is generally responsible for the promotion of civil aviation through such activities as the Civilian Pilot Training Program, begun in 1939 and continued until mid-1944 as the War Training Service—an activity whose resumption, we hope, Congress will approve with the coming of peace.

A third Federal agency—the State Department—plays an important part in our air transport activities, though its sphere of responsibility is limited to the international field.

It is the function of the State Department, working in close collaboration with the CAB, to negotiate with foreign governments for landing or transit rights and concessions. Once these are obtained, they are allocated among American carriers by the board. In addition, the State Department receives applications of foreign carriers for permits to operate into United States territory and transmits them to the board.

The Author

William A. M. Burden is one of the younger men holding high office in the Government. He is only 38.

A New Yorker by birth, Mr. Burden is a Harvard graduate, cum laude, 1927. From 1928 to 1932 he was an aviation financing analyst for Brown, Harriman & Company, leaving that position to join Scudder, Stevens, & Clark, New York investment counsel, to take over the aviation research department. Terminating seven years' service with the latter concern, Mr. Burden turned to the National Aviation Corporation where he became vice president and director in charge of air transport.

In May, 1941, Mr. Burden became vice president of Defense Supplies Corporation, an RFC subsidiary, in which position he headed the American Republics Aviation Division. Fourteen months later he became special aviation assistant to the Secretary of Commerce, and in February of this year he was named Assistant Secretary of Commerce of the United States.

The author has many Government and aviation affiliations. His articles have received wide circulation. Mr. Burden is the proud possessor of the larget privately owned air transportation library in the United States. It is now on loan to the Institute of Aeronautical Sciences.

These are the agencies which in one way or another affect the development of United States air transportation both within its continental limits and on international routes. Their views and those of the Congress will be kept in mind by the United States delegation as it works toward the three main objectives of the coming international conference. Paraphrasing the State Department announcement, these objectives are:

1.—*To make arrangements for immediate establishment of world air routes and services which would operate during a transitional period. Such arrangements would, of course, include the granting by participating nations of necessary landing and transit rights.*

2.—*To agree on the principles under which a permanent international aeronautics body would operate, and on the basic principles of an international agreement on air transport, air navigation, and technical subjects.*

3.—*To set up an interim council, with working committees to develop the details of such an agreement or convention, as it is technically called, incorporating the lessons learned in the transition period.*

The problems the conference will tackle fall into two main categories: the technical and the political. The technical problems are more complex, yet it will be easier to reach agreement on them because technical men realize they have a common interest in promoting a smoothly functioning system of international airways. If we can keep before us our common interests, rather than our differences, we may prove just as successful in reaching agreement on such hotly debated subjects as the degree of international control of the economic side of international air transportation operations.

The need for international standardization on the technical side is fairly obvious when one considers the difficulties that would confront a pilot crossing Europe if the countries over which he flew used different systems of radio aids operating on different frequencies, or varying methods of presenting weather information and different rules for approaching airports.

This problem was recognized as far back as 1919, when the International Convention for Air Navigation was drawn in Paris. For two decades following, until the outbreak of the present war, the technical annexes of this convention worked with a fair degree of success though they are now badly in need of revision.

Pre-War Arrangements

The attempted solution of the political problem was much less successful. Before the war international arrangements in air transport were complicated and burdensome. Many countries abused their unquestioned right to exclude foreign commercial aircraft from the air above their territory. In fact, this right of exclusion was exercised to a degree which seriously obstructed the development of international air commerce. In sharp contrast to the comparative freedom allowed steamship lines, all nations refused to permit commercial airplanes en route to other countries to pass over their territories or to land for refueling or emergency purposes without first obtaining governmental permission. The right to conduct business in foreign countries—that is, to pick up and discharge traffic could only be obtained after elaborate government negotiations. Air transport companies were, in fact, completely at the mercy of governments. The rights which they requested might be denied, if the government from which they were asked feared that its own airlines would suffer competitively from the new service, or for many other reasons.

These and other restrictions must be substantially relaxed if international air transportation is to meet the demands of the peoples of the world for safe and economical transportation.

Agenda for International Civil Aviation Conference

Hotel Stevens, Chicago, Ill.

(Beginning November 1, 1944)

I. Arrangements covering transitional period: Establishment of air transportation services on a provisional basis.

1. Arrangements for routes and services to operate during a transitional period.
2. Drafting of agreements to implement the provisional route pattern and to guide operations during transitional period.
   - (a) Landing and transit rights to permit establishment of provisional air services as soon as possible.
   - (b) Right of technical or non-traffic stop.
   - (c) Application of cabotage.
   - (d) Use of public airports and facilities, on a non-discriminatory basis.
   - (e) Frequency of operations.
   - (f) Bona fide nationality of air carriers.
   - (g) Control of rates and competitive practices.
3. Arrangements for and selection of continuing Committee on Air Transportation to serve during the transitional period.

II. Technical standards and procedures.

1. Recommendations for setting up and adopting standards and procedures in the following fields:
   - (a) Communications systems and air navigation aids, including ground markings.
   - (b) Rules of the air and traffic control practices.
   - (c) Standards governing the licensing of operating and mechanical personnel.
   - (d) Airworthiness of aircraft.
   - (e) Registration and identification of aircraft.
   - (f) Collection and exchange of meteorological information.
   - (g) Logbooks and manifests.
   - (h) Maps.
   - (i) Airports.
   - (j) Customs procedure.
2. Arrangements for and selection of a Technical Committee and subcommittees to serve during transitional period, and to draft definitive proposals for submission to the interested governments.

III. Multilateral Aviation Convention and International Aeronautical Body.

1. Formulation of principles to be followed in:
   - (a) Drawing up a new multilateral convention on air navigation and related subjects.
   - (b) Establishing such permanent international aeronautical body as may be agreed on, and determining the extent of its jurisdiction.
2. Arrangement for and selection of a Committee on Multilateral Convention and International Body to serve during transitional period and to draw up definitive proposals for submission to the interested governments.

IV. Consideration of establishment of Interim Council to serve during a transitional period which might supervise the work of other committees functioning during this period; and performing such other functions as the conference may determine.

1. Recommendations concerning locale, composition, and scope of Interim Council.
2. Length of transitional period, mechanism for converting recommendations of Interim Council and its committees into permanent arrangements, and other arrangements covering the transitional period.

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SHELL

FINER FUELS FOR THE AGE OF FLIGHT

As to the fear that air transportation will cause economic friction, there seems no more reason to expect that competition between airlines will produce "economic wars" than that competition in shipping or other forms of trade will produce the same results. A substantial degree of competition between companies of different nationalities is not only inevitable in any international business, but is necessary if air services are to develop in a healthy fashion, to improve their technique, and to serve the world public efficiently.

Those responsible for the ports of the United States and Canada must be vitally interested not only in the issues which face the international conference but also in three main questions that confront every center of seaborne trade. First, "How big a business is this international air transport likely to become?" Second, "How will its development affect the position of individual ports?" Third, "What steps can ports take to maintain their position in the air trade that is about to supplement passenger shipping operations to so great a degree?"

Numerous estimates have been made as to the volume of international air traffic which may be expected over the next few years. Such forecasting involves a high element of risk for the reputation of the forecaster. Fortunately not all the elements involved are imponderables. We know, for example, the kind of airplanes that will be used in intercontinental service. It takes four or five years to develop a large transport aircraft, and the prototypes or test models of the airplanes in which you will be crossing the Atlantic five years from now are already well along in construction, although they have not yet flown.

Knowing the aircraft that will be operated, it is possible to estimate accurately—barring violent changes in price level—what the cost of operation and speed of service will be. The typical New York to London trans-Atlantic air passenger of 1948 will travel in a 40- to 75-passenger, four-engine airplane which, except for size, will look very much like the Douglas Skymaster (C-54) or the Lockheed Constellation (C-69). He will be able to secure berth accommodation at least as comfortable as a Pullman for $250, or roughly the same as the minimum first-class fare on luxury steamships before the war.

Airline operating costs shrink rapidly as the distance to be flown nonstop decreases, and rates to Latin America will consequently be relatively lower than to Europe. Juan Trippe of Pan American has promised a 20-hour service to Buenos Aires for $190, or only three and one-half cents per mile—perhaps an optimistic figure but one that will ultimately be achieved.

Revolutionary Travel Habits

Fifteen hours to London and 20 hours to Buenos Aires means a revolution in travel habits. There is no doubt that a majority of those who formerly took first-class steamship passages will go by air in the future.

There are, however, two great uncertainties involved in predicting future volume. First, "What will the economic and political state of the world be after the war?" and second, "How much new traffic will the airplane create as distinct from traffic diverted from surface carriers?" The first question I intend to dodge with the general statement that I do not take a particularly gloomy view of the postwar world. As to the second, there is no doubt but that the vastly increased speed and convenience of the new air services as compared to the old ocean services will result in a much greater amount of international travel. Business men will make many more foreign trips when it becomes possible to visit Europe over a week-end. Families which have only two weeks' vacation a year will be able to visit the Continent or Latin America for the first time. Even though air travel will be substantially more expensive than the second-class or tourist steamship accommodations which the two-week vacationists usually use, many of them will doubtless be willing to save up for a year or two in order to enjoy the unusual experience of a trip abroad.

Taking all these factors into consideration I concur with Edward Warner's estimate that within the first postwar years newly created international air traffic will equal traffic diverted from steamship carriers. Dr. Warner estimates trans-Atlantic air traffic in this period at 100 to 120 thousand persons a year in each direction or 300 to 400 per day. He estimates traffic to South America, excluding the Caribbean, at 100 to 150 per day, and total international travel at two billion passenger miles, which incidentally is less than one-fifth of his estimate for domestic air travel at the same period in the future.

Nevertheless, two billion passenger miles of travel per year is a substantial volume of business for the ports of the world. At the relatively low fare of six cents per passenger mile it would mean annual passenger revenues of $120,000,000.

In the field of international air-freight we cannot expect volume even remotely approaching these estimates for passenger travel. The literally enormous difference in cost between ocean transport of merchandise and air transport will prove an insuperable barrier to developing air freight volume to the point where it will be insignificant even in terms of steamship traffic.

The average prewar ocean freight rate was only one-fifth of a cent per ton-mile, which, incidentally, was about one three hundred and fiftieth of the minimum rate for first-class passengers on ships of the Queen Mary type. The airlines will be doing well if they can get the trans-Atlantic air freight rates down to 20c to 30c per ton-mile in the first few years after the war. This is 125 to 150 times the steamship freight rate. The vast majority of freight is of such low value per ton and moves with so little urgency that even a great saving of time and convenience would be offset by a very trifling increase in transportation charges. There is, however, a modest amount of high-value goods which will move by air even at the rate of 20c to 30c per ton-mile.

Many Unknowns Exist

Obviously there are many unknowns which cannot at this time be measured statistically. For one thing, the speed of air service will create entirely new freight traffic—perishable commodities, for example, which previously could not be transported long distances. And then, there is the possibility of reducing weight through new packaging methods—an average reduction of 30 per cent in shipping weight has been reported on Army and Navy air transport services. Leaving out the unknowns, however, we can obtain some informative data on the basis of the four factors—value per pound, perishability, fragility, and style—and we may take Brazil as representative of the air trade possibilities in a large South American country.

Values per pound is probably the key consideration, for perishable, fragile, and "style factor" commodities now shipped to Brazil represent only one-half of one per cent of our total exports to that country. At 25 cents per ton-mile the transportation charges for one ton moving 4,000 miles would be $1,000. If the commodity were worth $3 a pound, or $6,000 a ton, the air-cargo charge would be 16.6 per cent of the value of the commodity, which compares not too unfavorably with a ratio of 8.43 per cent on railway freight movements.

Six thousand dollars per ton seems like a fantastically high value. But a number of prosaic types of goods fall into this category. For example, wool knit bathing suits exported from the United States to Brazil have an average value of $3.02 per pound; rayon socks, $3.18; playing cards, $4.92.

The style or obsolesence factor applies to such commodities as feature motion pictures, of which 89,000 pounds, with an average value of $3.16 per pound, were shipped from the United States to Brazil in 1939.

The survey indicates substantial possibilities for air cargo in proportion to present air operations, although the maximum potential would take only a tiny proportion of steamship business.

If we consider as potential air-cargo only those export commodities valued at $3 per pound or over, where the transportation charge would represent roughly 15 per cent of value, the dollar volume of goods suitable for air transport, including the perishable, fragile, or "style factor" commodities, would amount to 2.1 per cent of our total exports to Brazil and an equal percentage of our imports from that country. In weight it would amount to only 3,595 tons per year and the annual revenues to the airlines would be only $3,595,000.

If reductions in air-freight rates, due to technical improvements in aircraft and increased volume, eventually make it economically possible to ship goods with a value of only 50 cents per pound or $1,000 per ton, the total value of the goods available for air shipment would increase to 7.7 per cent by value of the total trade between the two countries and the total to 7,653 tons per year—still a very small business as merchandise transport goes.

Important Development Later

It is plain, then, that although transoceanic air cargo merits close study by port authorities, it is not likely to develop in important volume for many years to come. In the present state of the art it cannot be considered even a potential competitor of the steamship.

So much for the size of the international air trade in the first postwar decade. The passenger business will be large in terms of steamship travel (though probably only 10-20 per cent of our domestic airline passenger business) but the merchandise or freight business will be very small.

I know that many of you are asking yourselves, "What share of this traffic will go to the coastal cities? How much will originate or be delivered direct to interior ports."

Let me emphasize that the widespread use of the airplane will not cause any immediate fundamental change in our world economy. The flow of travel will continue to be determined by "the location of the major producing, distributing and consuming centers." However, as far as passenger traffic is concerned, the growth of international airlines will eventually produce some changes in the relative position of individual ports and in the position of all ports in relation to interior cities.

Air transportation is likely to produce changes in passenger travel habits because it makes direct international trade to inland cities possible for the first time. Many of

the applications of our domestic carriers for international routes give inland cities as their termini. Pan American Airways has just applied for permission to operate from Chicago and Detroit.

It is probable that there will be direct international air service to some inland pionts and these interior points are likely to originate a significant volume of passenger business. To this extent the supremacy which our coastal cities have enjoyed in foreign passenger travel will be reduced. However, the *total* volume of international travel will be greatly increased by the airplane. Coastal cities which adopt a progressive attitude toward air transport, encourage new air routes, and provide adequate ground facilities will be the gainers rather than the losers by the advent of the airplane to international trade.

The matter of airports will be just as important to the development of international traffic as docks and other facilities have been to sea traffic. Communities which fail to provide adequate facilities in this regard will suffer commensurately in the development of the new air trade.

To be in a position to take advantage of this trade many are working toward obtaining satisfactory airport facilities. In this connection, the national airport plan will shortly be submitted to Congress.

Our report emphasizes small airports, but it by no means overlooks the needs of domestic and international scheduled air transport. At places now designated as air carrier stops, we propose to improve 174 existing airports. The total number of Class 4 and 5 airports—the types used for trunkline transport—would be increased as a result of new construction or improvement from 708 to 856.

Our plans envision runway lengths of 5,000 feet at sea level for standard airline service to large communities, while transoceanic and intercontinental non-stop service and domestic flights of 1,000 miles or more may require runways 7,000 or more feet in length.

Proposal to Congress

We have recommended to Congress that this airport program be conducted in cooperation with the States and through them with municipal, county, or other sponsoring bodies. It is our proposal that the Federal contribution shall not exceed 50 per cent of the total cost of any project, the remaining half of the cost to be met by the public agency sponsoring the project.

In all, the proposed five-to-ten-year program would cost just over a billion dollars exclusive of land or buildings with the Federal contribution half that amount. The sum is a substantial one but is far exceeded by the funds which have been devoted to the fundamental facilities for other forms of transportation. In the last generation the Federal, State, and local governments have expended 25 billion dollars on roads. The great question before everyone interested in aviation is, "Shall we make a much smaller investment to start the United States on its way toward being a nation on wings?"

A great new transport industry is in the making—one that will vastly increase international travel and help to develop international trade. As travel and trade increase, so will the activity of the ports of the world grow and prosper. Air transportation does not threaten the steamship, for the vast majority of steamship revenue is derived from the carriage of freight—a field that the airplane of the next decade seems unlikely to penetrate to any significant degree.

Far from being a threat, international air transportation offers a stimulating challenge to constructive port authority management—a challenge to assist the growth of this new transport medium through intelligent promotion and through the provision of adequate facilities without falling a prey to blind optimism on one hand or hidebound conservatism on the other. The energy and imagination of the men who are assembled here provide convincing proof that they will meet that challenge!

Silver Anniversary Quietly Observed By Dutch Airline

KLM, the world's oldest airline, marks a quarter of a century of air service this month.

Although quietly jubilant over the invasion of Holland, no public celebration was planned either here or in London by KLM. That will come later, officials promised, when once again the old-time London to Amsterdam run is opened. That direct route was pioneered by KLM way back in 1919 when air commerce was in the blue-print stage.

The Flying Dutchman went on from there to blaze air trails across five continents, inaugurating a twice weekly service from Amsterdam to Batavia 9,000 miles away, a trip that took five days.

No immediate changes, no future plans were disclosed at KLM headquarters in New York. The emphasis right now is on their air commerce in the Caribbean, with KLM running a regular schedule between Miami and the Netherlands West Indies Islands of Aruba and Curacao.

Meet . . . Theodore Paul Wright

Administrator of Civil Aeronautics, United States Department of Commerce

IN 1941, President Roosevelt called to his office a small group of aviation experts and told its members that the nation needed a production program which would give our Air Forces the staggering minimum of 50,000 planes a year. When the program was made known, a number of legislators declared that it could not be done. One section of the press declared the order a "pipe dream" and "wishful thinking." But, in an amazingly short time, the quota was met—and later doubled.

It was Theodore Paul Wright who directed that "wishful thinking."

There is prestige in Mr. Wright's name, and every bit of it is earned. He has a BS degree from Lombard College, Galesburg—he was born in that town 49 years ago—and another BS degree in architectural engineering from Massachusetts Institute of Technology. Mr. Wright also boasts an honorary doctor of science degree from Knox College, Galesburg, in recognition of his "distinguished services to aeronautics."

But these are incidental to his career. It actually started after the last war when he was a Navy officer. An inspector of naval aircraft, the young officer was appointed superintendent of construction of naval aircraft for the New York District during his last year.

After leaving the Navy, Mr. Wright entered the organization known at that time as the Curtiss Aeroplane and Motor Company as executive engineer. He progressively held the positions of assistant factory manager, assistant chief engineer, and chief engineer of the airplane division of the company. Under his supervision as chief engineer many famous designs were turned out. Among them were the prize-winning Pulitzer and Snyder Cup racers and such famous military aircraft as the Hawk, Falcon, Helldiver, Shrike, and Condor; also such commercial types as the Robin, Fledgling, Kingbird, and Commercial Condor. These were followed by the sensational Tanager which won the Guggenheim Safe Aircraft Competition for Curtiss. Mr. Wright's paper, *The Tanager—A Safe Airplane*, won for him the Society of Automotive Engineers' coveted Wright Brothers' medal.

New System Inaugurated

During this time he inaugurated the Project Engineer system of aircraft design, development, and manufacture which has since become standard practice among practically all major aircraft manufacturers.

In 1931 after the merger which created the Curtiss-Wright Corp., the Curtiss Experimental Manufacturing and Research Activities at Garden City were consolidated with production plant at Buffalo. Mr. Wright was placed in charge of the combined operations as vice president and general manager. In 1937 he was elected a vice president of the parent Curtiss-Wright Corporation, to fill that post in addition to his duties as director of engineering.

New CAA Head

In June, 1940, Mr. Wright was called to Washington to serve with the advisory committee for the Council of National Defense in laying out a program which had in view the acceleration of the American aircraft industry. After some six months he returned to his duties with Curtiss-Wright. However, in February, 1941, he was recalled at the request of Mr. William Knudsen, now Lt. Gen. Knudsen, to act as assistant chief of the Aircraft Branch of the Office of Production Management, later WPB. In March, 1943, the former Aircraft Branch of the WPB was reorganized and became the Aircraft Resources Control Office of the Aircraft Production Board, with Mr. Wright as director.

On December 9, 1942, the Aircraft Production Board was established within the War Production Board by a directive from Donald M. Nelson. By order of the Aircraft Production Board, which order was signed by C. E. Wilson, Lt. Gen. William S. Knudsen, Maj. Gen. O. P. Echols, Rear Admiral Ralph C. Davison, and T. P. Wright, the Aircraft Resources Control Office (ARCO) was established on March 3, 1943.

The functions of ARCO as listed in this order were to serve as Executive Agency of the Aircraft Production Board on all matters pertaining to manpower, materials, and machine tools for aircraft; coordinate and publish joint schedules for the production of airframes, aircraft engines and propellers; prepare manpower, materials, and machine tools requirements for the aircraft program and serve as claimant agency under the Controlled Materials Plan; direct and supervise activities of the Aircraft Scheduling Unit, Dayton, Ohio, in the scheduling and allocating of materials, machine tools and components; coordinate aircraft materials conservation activities of AAF, Navy, and WPB; direct coordination of standardization; prepare and furnish all statistics on the aircraft program.

Appointed ARCO Director

Mr. Wright was appointed as Director of ARCO and Recorder of the Aircraft Production Board and as such has responsibility for the direction of the entire U. S. aircraft production program. It was this group which raised the President's request for 50,000 planes to 100,000 planes.

Today the offices of ARCO are located in the Pentagon Building. There are approximately 75 civilian employees equally divided between the AAF and Navy Bureau of Aeronautics. Mr. Wright's name appears on the AAF Organization Chart as one of its two civilian division directors. He, however, is employed by the Navy Department. To complicate matters further, his orders are received from the Aircraft Production Board which is organizationally located in the War Production Board. It is particularly to his credit that Mr. Wright has made this arrangement work and has the confidence of all organizations involved—the AAF, Navy, and WPB.

Mr. Wright has contributed widely to the literature of aircraft manufacturing, engineering and design. His papers have been published in the *Journal of Aeronautical Sciences*, *Journal of the Royal Aeronautical Society*, *Aviation*, and *Aero Digest*.

It should be noted that Mr. Wright's article, *The Truth About the National Defense Program* published in the January, 1941, issue of *Aviation* won for that magazine the Industrial Marketing Award of Merit for the best article or editorial published in a business publication during the period of August 1, 1940, to July 31, 1941.

In 1942 and again in 1943 he headed important missions to England in connection with aircraft affairs. On both occasions he was received by King George.

College Gives New Course at Request Of Aviation Industry

Texas A. & M. College launched this month a two-year course in aviation operations management. The purpose of the new course is to train airport and fixed base operations managers.

The course consists of three terms each year for a two-year period and qualifies under terms of the GI Bill making returning war veterans eligible for Government benefits if they desire to take the course.

According to Dr. Howard W. Barlow, acting dean of engineering, training in aircraft and aircraft engine mechanics sufficient to prepare students for the engine mechanics examinations are given along with flight instruction sufficient to qualify them for commercial-instructor-pilot examinations.

In addition to the required work, related studies are offered in applied mathematics, report writing, sketching and plan reading, aviation ground school, airport management, airport layout, airport accounting, etc.

Chenea Turns Sleuth

Ellery Queen did V. E. Chenea, vice president and general traffic manager of the Pan American World Airways System, one better at a recent broadcast of the famous crime story—he put the finger on the guilty party. Mr. Chenea pondered the evidence, as a guest detective on the Emerson Drug-sponsored, NBC-beamed mystery thriller, but guessed wrong. Now if it had been anything to do with global air transport . . . !

AIR MAIL—ITS PAST, PRESENT AND FUTURE

The Postmaster General of the United States is sure that air mail is "tied to the growth of our commerce." But even though his department will encourage and assist aviation development, he is not sure aircraft will supersede ground short haul traffic immediately.

By FRANK C. WALKER

Postmaster General of the United States

ON my last postal inspection trip to the Pacific Coast States last Spring delays were occurring in the transportation of the air mail. Because of the tremendous increase in the volume of air mail, the situation was extremely difficult for those of us concerned with maintaining an expeditious postal service.

Our fleet of 324 mail-carrying planes had been reduced to 165 on June 1, 1942, to provide urgently needed transport aircraft for military use. By March of this year, the War Department had returned 26 of the 159 planes requisitioned, bringing the total fleet available for the domestic service up to 191 planes. But the volume of air mail had increased at an unprecedented rate and there were times when it could not be completely accommodated along with heavy war-connected priority traffic. With only half the number of planes formerly available, the airlines were called upon to carry a volume of air mail which had swollen by 150 percent.

Happily, that situation has now largely been corrected. In response to our urgent appeals, the War Department has found it possible to assist us with the return of additional planes and we now have a total of 257 in the service with a total of 300 expected by the close of the year. High utilization developed by the air carriers has almost doubled the daily mileage per plane and a greater number of schedules are being operated on the trunk lines than ever before. Thus, while occasional delays are inevitable under present conditions, the inherent advantages of air mail are again being demonstrated and emphasized.

What has been accomplished since last March may be understood by reference to the number of daily schedules from the Pacific Coast to the East. At San Francisco, these have been increased from nine to 13, and for the entire West Coast from 33 to 47—increases in daily trips of more than 44 percent and 42 percent, respectively. Five of these 47 trips are exclusive cargo ships and sometimes the mail load runs higher than three tons on a single plane. The total volume of air mail being carried daily to the East from the West Coast is more than 24 tons—not including north-south mail.

Frisco Increase Highest

The present monthly volume of air mail being dispatched to planes, according to our trend-analysis figures, is upward of 4,500 tons, at a little more than 300 points—for a current increase of approximately 30 percent over the same month a year ago. San Francisco's current increase of 135 percent leads the entire country. The monthly total air mail dispatched to inland routes from San Francisco at present is about 375 tons, or 12½ tons daily. This

is being slightly exceeded only by Chicago, New York City and Los Angeles, in the order named.

Today, 24 years after adventurous men pioneered the first transcontinental air mail flight, air mail is on a self-sustaining basis. What can we expect to see in the future?

All of us have heard predictions as to the role of the airplane in the years to come. We know that great aircraft have been constructed in a quantity undreamed of even five years ago, and we know that the end of the war will probably find many thousands of planes available. We are told that within a decade after the end of the war the United States may well have 500,000 military, commercial and private planes in active use.

We might well pause here and recall what was our experience in the past. In 1930 the airlines had 479 planes and flew almost 15 million revenue miles. By 1937, when the number of revenue miles had soared to almost 40 million, the number of planes had fallen in those seven years from 479 to 257 because of the larger size and better utilization of new types. The highest number of planes in use since 1937 was 364. The swollen volume of passengers and mail transport of wartime America in October 1944 is being cared for by 257 planes.

Air Parcel Post Hearings Soon

Before the year is out, Representative Chet Holifield of California plans to hold hearings on legislation setting up a system of air parcel post. Holifield is chairman of the subcommittee on air mail service of the House Post Office and Post Roads Committee.

The congressman's legislation contemplates classifying air mail service "on the basis of reasonable rates which would not require a Government subsidy." The following tentative rates for air service other than first-class postage have been set up:

Up to 600 miles—44 cents for each pound or fraction thereof; 600 to 1,000 miles—48 cents; 1,000 to 1,400 miles—54 cents; 1,400 to 1,800 miles—60 cents; 1,800 to 2,200 miles—66 cents; 2,200 to 2,600 miles—72 cents; over 2,600 miles—78 cents.

Promotion for R. M. Martin

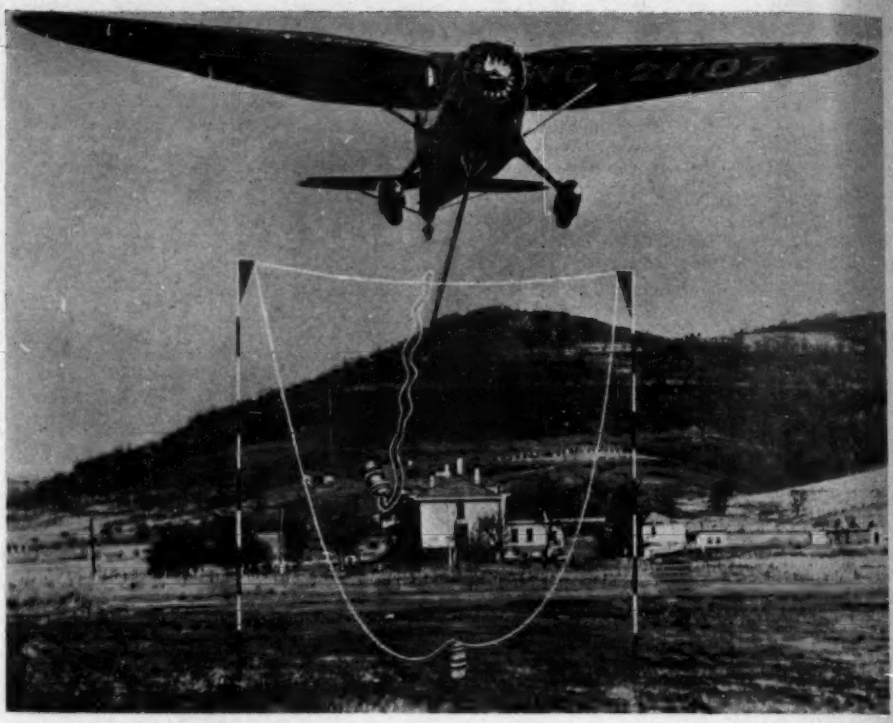
Roy M. Martin, for four years superintendent of air mail for the Post Office Department, has been promoted to the position of Deputy Second Assistant Postmaster General, Robert S. Burgess, formerly assistant superintendent of air mail service at Atlanta, Ga., has come to Washington to take over Mr. Martin's old duties.

Roy M. Martin

We can now reasonably believe that at least the European war is approaching its conclusion. For many months the Post Office Department has been laying its plans and the department is prepared and ready to meet changing conditions and needs. To us, nothing is more important than swift, safe, and sure transportation. There now exist—and development goes on apace—methods of transportation by air, rail, motor vehicle and water craft not envisioned even a few years ago. Each one of these systems is important. All of them must be coordinated so that each will complement the other—with the sole end of achieving speed of communication.

Many months ago I wrote to the chairman of CAB concerning the future expansion of domestic air mail service, at a time when much was being said concerning feeder routes to connect with our great air trunk lines which cross and recross the continent. I called attention to the fact that there was not an immediate prospect of using aircraft in sections where the passenger and express traffic, combined with mail, would be so small as to make impracticable the establishment of such routes.

I stated that "in contemplating the matter of feeded routes, it should be borne in mind that motor transportation will be resumed after the war with increased emphasis. This medium is well adapted for short haul traffic and high in popular favor. Supersedure by aircraft is not in immediate prospect. There will be few



IT PICKS UP MEN, TOO— ***All American Aviation air pick-up, used in 118 cities and towns in this country, recently was revealed to be picking up human cargo in the European sector. Patriots with valuable information for the Allies are dropped packages containing specially designed harnesses. When the plane returns at the appointed time, the harnessed man, lying flat on the ground, is hooked onto a tow-rope, and within a few minutes is hauled into the plane. This whole business is described as "completely free of risk." Above the pick-up plane is shown getting a consignment of air mail.***

of the many proposals for local and feeder air service that will meet the searching tests of practicability and economy in competition with surface transportation having inherent advantages.

"The Post Office Department will continue to give all proper encouragement and wise assistance to aviation development. At the same time it will be mindful of a like obligation to other forms of transportation also vital to the safety and well-being of the nation. By utilizing the peculiar advantages of each, impartially, a completely effective and reliable postal service will be maintained, and a material contribution made to the stability of the entire transportation system."

This we do know—that the domestic air mail service is on a fully self-sustaining basis. Revenues have exceeded payments to carriers and all other expenses for the past two fiscal years. It has undoubtedly been chosen by the public generally as the communication instrumentality of the postal service best suited to long-distant mail transport in the stress and tempo of our day. Continued popularity and increasing volume seem assured for the future.

Air mail has become an accepted feature of American life. Its growth is assured. It reflects the spirit of our age and in a peculiar way the spirit of America. It is tied to the growth of our commerce and to the binding together of the many parts of our country. It is something of which all of us may be proud. It is something in which all of us have a substantial interest.

ARE YOU ANOTHER AVIATION PROPHET?

A Delta Air Lines director offers some hard common sense and urges to keep one foot on the ground while planning. Facts? Figures? Possibilities? Probabilities? . . . They're all here.

By E. MARION JOHNSON

Enthusiastic visionaries have been letting themselves go on various aspects of the aviation picture for the postwar era. While Mr. Johnson looks forward to a brilliant future for passenger travel and air-cargo, he nevertheless adopts the careful point of view of the old-timers who "take a more sober view." —the Editor.

IT appears that the European phase of the war is drawing to a conclusion. Soon many of the restrictions that are now limiting the expansion of private and commercial aviation will be lifted. The time has come to plan, *realistically,* for our postwar use of the skyways.

A lot of people seem to expect aviation to be the No. 1 postwar industry. Looking behind the war clouds, these folks are making predictions rather freely about our industry. They tell of flying freight trains that will soar overhead, dropping off a glider or two which contain cargoes for local merchants. And the tow plane may then circle and jerk aloft some outgoing gliders. A few old-fashioned folks, they concede, will continue to drive conventional automobiles, in this new air age, but almost everyone else, according to these postwar prophets, will have the new folding wing models. A few others will, of course, prefer the amphibians because of their usefulness on fishing trips.

These forecasters also say that some of the suburbanites will use helicopters between their country homes and offices because they are unwilling to drive the folding wing models through traffic until they reach a wide place in the road where takeoffs and landings are permitted.

Almost every town will have airline service, and the airliners will be multi-motored or jet-propeller giants capable of carrying 100 passengers and more.

The two weeks' vacation of the average working person will be spent in South America, or Sweden, or India; and Paris will be a nice spot for a weekend trip.

This vast industry which the public is beginning to take for granted is expected to solve much of the employment headaches resulting from the end of the war. Such flights of fancy make interesting conversation, and can be beautifully illustrated in the Sunday supplements. But old-timers in the airline business take a more sober view and offer some down-to-earth facts.

I am told that it is true that there are practically no limitations as to the size it is possible to build planes, but the usefulness of the aerial giants is not explained. Let us analyze the predictions of the dreamers.

Aviation's Postwar Outlook

What is the postwar outlook for aviation? As before the war, except in greater numbers, we will have three major types of planes:

1. *Commercial: principally for passenger service, but also a gradually increasing number of cargo planes.*

2. *Private: including those owned by business establishments for official use.*

3. *Military.*

We will devote our discussion to the first two classifications.

If we assumed that all normal prewar rail passenger travel from Birmingham were diverted from trains to planes, that would mean that we would have about 1,000 departures a day traveling an average of 200 miles each—a daily total of 200,000 passenger miles a day.

Five DC-3's, the 21-passenger planes now currently used by Delta, flying only 12 hours daily would provide the necessary seat miles to handle all of this traffic. Of course, in

immediate postwar years the airlines are not going to have any such volume of traffic. The more competent analysts variously estimate postwar airline passenger traffic by 1950 will be from four to 10 times that of prewar days. Let's settle for seven times.

A seven-fold increase means that, instead of providing transportation for four-tenths of one percent of all passenger miles, the airlines will supply nearly three percent of the nation's passenger transportation. The automobile and buses will still account for 90 per cent; the railroads, holding their relative position, about eight percent; and waterways, half of one percent. Before the war, coastal, lake and river steamers actually carried more passengers than did the airlines.

Now as to the postwar commercial planes:

There were only 358 commercial airliners in scheduled service at the outbreak of the war. Half of these were taken over by the Army, and the phenomenal wartime air service of the commercial lines has been performed with the remaining planes. So we see that the postwar skyways in the United States are not immediately going to be filled with aerial leviathans carrying scores of passengers with all the comforts of a deluxe hotel.

Aviation Lusty Infant

Don't forget it has been only 40 years since the Wright brothers took their crude first-power-driven airplane aloft. Commercial aviation is only about 16 years old in the United States. Despite all you have heard about it, aviation is still just a baby industry, although the infant is getting lustier.

Immediately after the war, the planes to be used will be just about what they were before the war, except there will be also 40- to 60-passenger planes. These larger planes were designed for the airlines but went into war service before they became available to the air travelers. It is expected by airline operation officials that for a transition period of three or four years, air lines will gradually replace or augment their present DC3's with modified versions of such tested equipment as the Douglas DC-4, the Curtiss Commando, the Lockheed Constellation, the improved Lodestar, and possibly a few others. There are a lot of interesting ideas still on drawing boards that will result in changes, but planes must prove themselves before they are permitted to fly commercially.

The Curtiss-Wright Corporation has estimated that 1,000 planes about twice the size of a DC-3, operating only 10 hours a day at two-thirds their capacity, could in one year handle *all the 1940* domestic airline traffic—passenger, express and mail, plus all the 1940 Pullman travel, plus all the first class railway express, plus all first class mail.

Their study as to the number of planes needed to serve the expected domestic traffic of 1950—allowing for a two-thirds average load per plane—indicates that about 580 planes will do the job. This fleet would be composed of about 90 feeder type planes—10 to 15 passengers; about 215 small trunk line planes—20 to 25 passengers; about 265 intermediate trunk line planes—40 to 60 passengers; and about a half dozen of the leviathans—80 to 125 passenger planes for use principally in transcontinental service.

The improved postwar load factors, as compared with prewar days, and an increasing efficiency of newer models, will result in gradually lowered fares. It is believed an eventual 3.5 cent fare per mile is in sight. Postwar speeds will increase. The Constellation has crossed the continent in less than seven hours. It is reported, too, that a jet engine plane has been flown from Los Angeles to Chicago at a still greater speed.

Improved mail service will be one of the big postwar benefits. A United States Senate committee has recommended the transportation of all first class mail by air whenever such service will result in speedier delivery. There is little doubt that *regular first class mail* will soon be air mail.

But there will also be other commercial air service besides the trunk line operations. There is every reason to believe that there will be an increase in long haul charter service and a shorter haul air taxi service.

Feeder Operations Problems

There will be some feeder operations, but my personal feeling is that this service will not be expanded to a degree many believe. When the airplane seeks to give service to the small towns, it faces these handicaps:

1. *Its charges will be high compared to automobile travel. Three or four persons can go in the car for the cost of one person by plane.*

2. *If frequent stops on a feeder route are made, the saving in time will be negligible.*

3. *If schedules are made to suit best the mails, they usually will be inconvenient for travelers.*

4. *Traffic will not warrant frequent schedules, and that, too, loses traffic.*

5. *Cargo possibilities are overestimated. Small towns within 300 miles and even farther of wholesaling centers now get overnight delivery by truck at a fraction of the cost that would be paid for air express. Why pay more?*

6. *Few persons in a small town make distant trips. The greater volume of travel is to near-by points. The Public Roads Administration has found that only about one and one-half per cent of all highway travel is for trips of more than 100 miles. The motor vehicle will be the short haul carrier for a long time to come.*

All in all, the airplane has speed to offer primarily. Within areas where no material saving in time is provided by speed, air transportation ceases to have an advantage over surface transportation.

There are certain areas where feeder routes will doubtless prove desirable, but the belief that the airplane can perform both long-haul and short-haul service is, to my mind, misguided optimism. Such services as are proposed for feeder lines are more likely to be performed by the flexible service which air taxis will make possible. Air cargo services, especially over longer distances that give the airplane an advantage, are more likely to develop.

Research Findings Interesting

A research group at Wayne University, Detroit, has just concluded a survey on the potentialities of air transportation for fruit and vegetables. The Wayne survey claims that the saving in time will benefit perishable fruits by allowing for fuller development and ripening on the vine and tree, thereby improving flavor and nutritive content. There will also be less shrinkage and spoilage, resulting in a reduction of claims.

Much of the loss of the vitamin content of perishable food, estimated to be fully one half during the week or longer required for conventional transportation from grower to consumer, will be avoided which, in turn, will bring about material reduction in the nation's bill for concentrated vitamins estimated at 40 million dollars in 1942. I have been told that the big department stores also have extensive plans for the use of air express in connection with fashion and novelty goods, special orders and many other uses.

L. Welch Pogue, chairman of CAB, who also participated in the Detroit conference, said:

> "Packing can be less expensive because it need not be so heavy as when shipping by rail or truck. Much handling can be eliminated in many cases because an airplane can go directly from anywhere to anywhere. Breakage and spoilage will be reduced and, in many cases, eliminated. Insurance will be saved because the risk may be less and the time of coverage is drastically reduced.
>
> "Inventories can be reduced when a consumer market is within hours rather than days and weeks of the wholesaler or middleman. In some cases, capital goods can be eliminated because one plant can serve a wider territory. Refrigeration, where required, may possibly be provided by nature absolutely free, at 10,000 to 20,000 or more feet of altitude, depending upon how cold you want the cargo to be."

The airplane will merely *supplement* other carriers in cargo transportation. Its rates will keep it from being otherwise. It has been calculated that a DC-3 operating at 100 percent capacity could carry cargo at a rate of 27 cents a ton-mile. It is believed that eventual rates of 15 cents a ton-mile are foreseeable. The five-cent air freight rates one hears so often mentioned are still something to dream about, whereas railroads presently perform freight service for less than one-cent a ton-mile. The use of air cargo service will be restricted to high value, perishable or otherwise urgent shipments.

Flexibility of Planes

Don't overlook the flexibility of the airplane. Routes can change as justified by traffic flows. The numbers and sizes of airplanes can be altered without changing much on the ground, provided the airport facilities are adequate. The airplane makes it possible to fly the ocean without changing from one form of transportation to another at the water's edge. Inland cities can become ports, for the airplane knows no boundaries.

The helicopter, according to available data, will, for the next few years, be an extremely costly means of transportation. Its usefulness will be limited to special, very short flights where an airplane cannot perform satisfactorily and where rapid ground transportation is not available. Experts believe further developments are needed in this type before amateur pilots can put them to private use.

The helicopter is often mentioned for taxi service between business centers and airports. Unquestionably they will eventually be used in some large cities for this purpose, but perhaps not as quickly as some people believe.

The average man's chances of owning a conventional plane are good, if there is justification or desire. But—remember an automobile needs only a change of oil every 1,000 miles or so, and an occasional visit to a garage. An airplane needs more than backyard tinkering. It should be checked by a Government licensed mechanic at regular intervals, and in the interest of safety the engine needs overhauling every 500 hours. Private planes will become more common, but think a minute before you buy a farm and cut down the fruit trees to provide a landing area. Aerocars or combination automobiles and airplanes are possible but not practical—in the opinion of those who should know. Fliers who know the air traffic problems already encountered at busy airports just shudder at the suggestion of using highways for landing purposes as some have suggested.

The Author

E. Marion Johnson, director of planning and reasearch for Delta Air Lines, came to Atlanta from his position as chairman of the Department of Business Management in the School of Journalism, Syracuse University, and manager of the New York Press Association.

From 1933 to 1935 he served in Washington on the staff of Joseph B. Eastman, Federal coordinator of transportation, as assistant in charge of the section of transportation service passenger traffic survey. Previous to this he was a vice president of the Travel Guild, Inc., Chicago, in charge of research and advertising; and for several years, following, he was the director of market research and advertising for the Traffic Service Corporation, also of Chicago. He left this position in 1940 to accept his appointment at Syracuse University.

While at the University of Minnesota, where he was chairman of the Department of Journalism, he also served as director of a program of university-sponsored traveling summer schools through Europe. Before going to Minnesota he was for seven years a member of the School of Journalism faculty at the University of Wisconsin.

Mr. Johnson's newspaper experience included work on several newspapers in Kansas, the Milwaukee *Journal* and the Philadelphia *North American*. His publishing experience includes the founding of The Scholastic Editor in 1922, which he published until 1930 when he sold the magazine to its present owners. In 1929, Mr. Johnson was president of the American Association of Teachers of Journalism.

Competent estimates as to the number of private planes that will be in operation by 1950 vary from 100,000 to 500,000. Suppose we take the higher estimate. That would mean about one plane for every 140 motor vehicles. It would also include planes owned by business concerns for the use of executives, by schools for instruction, and all uses other than regularly scheduled transportation.

On Airport Locations

Robert Moses, the far-sighted planner and park commissioner of New York, has some interesting suggestions regarding airports and their location. He says:

> "Our longest-haired planners and architects are telling us that future towns and cities will be built around airports and that our primary problem will be to locate the airports. But airports have many drawbacks. Quiet and gracious living can be made impossible by unrestricted use of planes. The very finest airports are needed in the larger communities, but they should be at proper locations, usually on the outskirts. No one has yet demonstrated that planes even save time on short trips. The trick will be to make the airports accessible by proper highway construction."

Guard against local legislation which may hinder the development of aviation. If future airplanes can cross a dozen startes in seven hours from the Atlantic to the Pacific, they will spend only some 30 minutes over the average state. Commercial transport lines will serve best if they have but a single set of regulations by which to abide. Excessive state taxes will mean a minimum of service; more liberal states will benefit.

In the case of private flyers, care should be taken not to discourage them by varying local and state restrictions. Their planes, too, will cross the state lines quickly.

There are many postwar problems ahead for us in aviation, but through joint effort we will find answers for them. The only monotony is constant change. The sky is the limit, but in our plans let's keep one foot on the ground.

ROCKLAND COUNTY, N. Y., GOES AIR-MINDED

Rockland County, N. Y., well-known home of a large number of celebrities and influential people, will have a large airfield, if plans of the Rockland County Planning Board go through. A tentative site has been selected with the aid of Thomas H. Kuhn, airport engineer of the CAA attached to LaGuardia Field.

On the western bank of the Hudson River, the southern tip of Rockland is only about a half-hour's automobile drive from New York. It offers numerous possibilities for a busy airport, particularly in view of the fact that several large industries are situated in various parts of the county. Among the industries are Lederle Laboratories, one of the largest chemical plants in the country, producers of penicillin and blood plasma; Robert Gair Company, paper mill; and Wilcox-Gibbs, sewing machine manufacturers. Some of the biggest farms in the state are also found in this area.

Nyack, one of the busier villages in the county, is already designated as a regular stop on the new Hudson River Air Line route, which Pickair will soon inaugurate with flights connecting Wall Street, N. Y. and Albany.

Those who represented the planning board were Peter Murdock, Calvin T. Allison, Herman N. Irion, Jacob Pesner, and Oscar J. Heinz. Also present was Lt. Albert Morris, local Civilian Air Patrol recruiting officer.

The board is keenly interested in the Jennings-Rayburn Bill providing for an annual appropriation of $100.000.000 for 10 years, 50 per cent of which would be distributed among municipalities for the construction of airports. States would be expected to contribute 25 per cent of the cost.

THE DRUG BUSINESS WILL TAKE ITS MEDICINE VIA

TODAY, a large part of the wholesale druggist's capital is tied up on his shelves, merchandise held in reserve for unforseen contingencies. Air Commerce, ever ready to serve every demand of the trade, will free a good share of this frozen money. Postwar, the drug trade will get its supplies swiftly by air. Even the remotest hamlet can depend on Air Transportation to rush delivery of medical supplies during an emergency. Count on Curtiss Commandos to play an important part in the development of a super-service for the drug trade. LOOK TO THE SKY, AMERICA!

Curtiss-Wright Corporation, Airplane Division.

Curtiss Commando

Low Bidder for Tomorrow's Air Commerce

***EXPRESS**—The Fireball Express, in preparation for its journey of some 14,000 miles to India where Allied forces are waiting for the goods it carries, takes on gasoline at Miami, Fla.*

Air Bridge To India

True to its name, the *Fireball Express* is speeding the goods of war to India over an aerial supply line of some 14,000 miles . . . Here is a picture in words of the *Fireball Express* and its job

FOR the United Nations' success in the China-Burma-India theatre, no small credit is due our flyers of the *Fireball Express* who are speeding American production over an aerial supply line of 14,000 miles to the spot where it is vitally needed.

The *Fireball Express*, newest activity of the Air Transport Command, operates between the East Coast of the United States and India and has been moving vital cargo to the Far East theatre in ever-increasing quantities. These supplies are moved on regular schedules with departures several times a week from Miami, Florida.

The round trip for this operation, aggregating 28,000 miles, has taken a little over eight days. It approximates the equatorial distance around the earth. As a consequence, more and more supplies can be flown across the Hump into China, and more and more Japs are being driven back to where they came from.

Well over 1,000,000 miles have been flown since the service was inaugurated on November 16, 1943. This means critical cargo moved to relieve critical situations. As a consequence, the number of grounded planes in the theatre was reduced approximately 50 percent within a short time after the service began.

The crews of the *Fireball Express* are world commuters. For example, Pilot Jimmy Levert and his men had supper on a Sunday night in Miami, Fla., and took off from there in a Liberator Express. The same plane, with its cargo, alighted in Assam, India, 14,000 miles away, on Thursday before supper. That evening the plane, unloaded of its war cargo and refilled with soldiers' mail, took off from Assam. The following Monday it landed back in Miami, ready for a new cargo.

Crews Change Regularly

Of course, no crew could keep awake for eight days and eight nights and fly a plane over oceans, deserts, jungles and mountain ranges. So the *Fireball* operates on the principle of the pioneer stagecoach. The stagecoach usually went straight through and the horses were changed at established staging points. The Ferrying Division's service changes crews at staging points but sends the plane on with its load. Thus each crew flies 14 or 16 hours on a leg of the journey, then delivers the plane to men waiting for it, and devotes a few days to storing up sleep before taking a new plane.

The men who make up the crew come

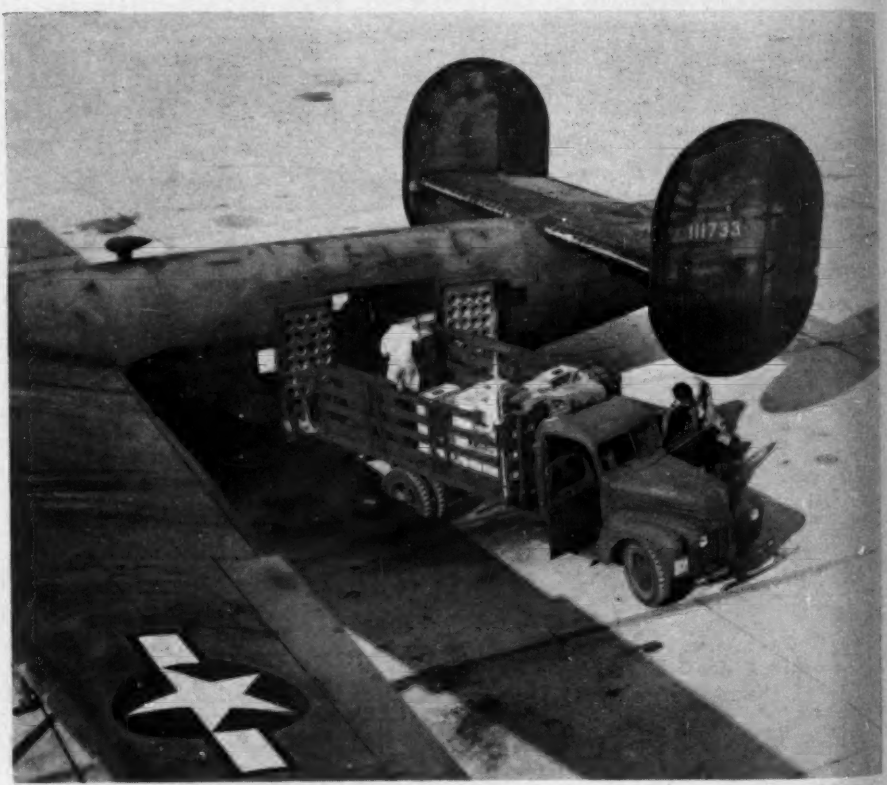
from all over the American map. A typical camp is just this side of the Hump—the gap in the Himalayas across which our Army flies war supplies to China. It is a camp of mud surrounded by tea paddies and Indian coolies. At night the men sleep under individual mosquito bars, to avoid the malaria-carrying insect. When they go to the movies held outdoors, except in the moonsoon season, they anoint themselves with insect repellent and wear GI shoes or boots to cover their ankles.

Luggage Kept to Minimum

Fireball pilots carry a minimum of luggage, yet it covers quite a range. In the air they dress for warmth; in India they wear thin khaki. They take along a Class A uniform to wear in Army camps which prescribe this uniform be worn in the mess hall and on the street. Laundry presents a problem. Sometimes the men leave it at an airport and retrieve it on their return trip.

Every *Fireball* plane carries all modern devices for safety. Parachutes are complete with a jungle kit, containing emergency water, fever pills, a jungle knife, a compass and compressed food. For ocean flights there are life-rafts. Very pistols are also included, and a green powder, which sprinkled over the surface of the ocean, makes a bright signal to planes. A further item required for international flying is pyrethrum bombs for killing off any insect pests before landing in a foreign country.

Most of the *Fireball* crew members have



***VITAL GOODS**—Before the take-off a capacity payload of war goods, supplies and mail is loaded on the* **Fireball Express** *for a speedy journey over some 14,000 miles to India. No small part of the Allied successes in the China-Burma-India Theatre is due to the transportation job which the men and planes of the Air Transport Command are doing.*

ENGINES — ***The*** **Fireball Express** ***owes a debt of gratitude to the mechanics of Uncle Sam's air force. It is the mechanics who keep this speedy and important plane in working condition. Here the ground crew takes over for an engine change at Miami, Fla.***

had a reasonably safe time flying for the Army, preferring the routine of safe landings and take-offs to jungle experiences.

MAILMAN—***For G.I. Joe in far-off India a letter from home is like blood plasma to the wounded. Even the nose of the*** **Fireball Express** ***is loaded—this time with mail for the American jungle fighters.***

Early trips of the *Fireball* airline were pretty tough. One crew made three legs of the journey with only two hours of sleep. The cargo planes first used were made-over B-24s, with bomb-bay doors that made loading difficult, and tended to throw the plane's center of gravity toward the tail. C-87s avoid this danger.

A recent joke in the *Fireball's* small mimeographed paper mentioned a passenger who complained because, if he got off the plane to buy a sandwich, he missed the plane. "Sorry," observed the editor, "but this can't be corrected. In the future we won't stop long enough for the passengers to get off."

The *Fireball* is an airline where passengers take second place, except in the case of relief pilots. Essential freight, repair parts, new aircraft motors, medical supplies and mail today hold the highest priorities.

The job of setting up this transport service was delegated by Maj. Gen. Harold L. George, Commanding General of the ATC, to Brig. Gen. William H. Tunner, Commanding General of the Ferrying Division, who since has been succeeded by Brig. Gen. Bob E. Nowland. Experienced and capable men for

Brig. Gen. Bob E. Nowland, Commanding Officer, Ferrying Division, ATC.

organization of this service already were available in the Ferrying Division.

Men, such as Col. Temple G. Bowen of Ft. Worth, Tex. and Lt. Col. Joseph C. Mackey of Columbus, O., got the service started.

Col. Bowen is Assistant for Transport on the staff of General Tunner. He was identified with air transport development in Texas, having organized the Texas Air Transport and later, Bowen Air Lines. Col. Bowen was general manager and vice president of Bowen Bus Lines when he took a leave of absence to offer his services to the Army.

Lt. Col. Mackey is a 35-year-old pilot who has been flying for 17 years. He was ferrying planes for the RCAF before this country entered the war. He immediately transferred to our own military service after Pearl Harbor and has made more than 20 Atlantic crossings as a pilot.

Col. Bowen brings administrative and organizational experience to the staff. Lt. Col. Mackey makes available a wealth of operational experience. The latter is stationed at the departure terminal of the transport service. Col. Bowen is in Cincinnati. Together, the two of them are providing brilliant execution of the program originally defined by Gen. Tunner.

Only a handful of hours after the *Fireball Express* left the United States, an Indian laborer is shown stacking various types of air freight brought by the plane which made the flight over the Hump. Small world, ain't it?

Only a handful of hours after the* Fireball Express *left the United States, an Indian laborer is shown stacking various types of air freight brought by the plane which made the flight over the Hump. Small world, ain't it?

Fireball Express Sets New Record

The **ATX** *has revealed that more than 23,000 tons of military cargo, including trucks, jeeps, war munitions, and other war materials were flown over the Hump last month. As a result of the ATC's work, "air freight from India to China long ago started flowing in greater volume than ever went via the Burma Road." The new FIREBALL EXPRESS record is twice the tonnage mark set 10 months ago.*

Army Okays Features On Fairchild Aircraft's New C-82 Cargoplane

Following Army approval of the new Fairchild C-82 cargoplane, which was successfully test-flown by Benny Howard, it is now possible to reveal a number of additional facts on the plane.

Definitely in the 50,000-pound class, the C-82 is a twin-boom cargoplane resembling a giant P-38. Loading is done at truckbed level from the rear. The rear swings completely open so that cargo as large as the interior dimensions of the plane can be loaded rapidly and with ease. In addition, it carries a ramp within it so that goods can be hauled in or put off by the use of a winch.

Wright's Looks to TO

It's a far cry from the Kitty Hawk of 1903, but when Wright Aeronautical was formed in 1919 it was the real beginning of shrinking distances. Today Baghdad is no farther than was Centreville.

By Richard Malkin

THE DAWN OF AVIATION—This is the epic flight by Orville Wright on December 17, 1903. Wilbur, running alongside, watches the sudden unfolding of a new era.

IN the marching history of progress there are inevitable high spots of grueling tension when the press of a button or the flick of a switch may well decide the success or failure of an effort.

For Orville and Wilbur Wright, a pair of bicycle repairmen, it was neither a button nor a switch, but merely the toss of a coin to decide which of the brothers would attempt the first flight in their overgrown box-like affair.

That initial flight was won for Wilbur whose coin fell head side up. And so, on December 14, 1903, the plane received its first launching—but the three-and-a-half-second trial proved only that the method of launching was efficient.

A three-day lapse. This time it was Orville's turn as pilot. A wooden track covered a stretch of level sand, the fantastic-looking flying machine poised on it like an awkward prehistoric monster. The North Carolina coastal winds swept over Kitty Hawk, tearing at the bizarre folly of the Wrights.

The rest is indelible history. Orville was borne into the air, sitting astride a flying machine throbbing with power. That flight lasted all of 12 seconds.

There were later flights, but for some reason the newspapers and magazines of the day more or less ignored the Wrights. A controversy developed; and, after nearly five years of haggling among visionaries and mental isolationists, the first public

NAVY RACER—Shortly after the Wright Aeronautical Corporation entered the plane-building field in 1919, it produced the NW-2. In trials it broke the world's seaplane record, averaging 186 miles an hour.

THE COLUMBIA—Built in 1926, it won speed and efficiency races. This plane was used by Clarence Chamberlin and Bert Acosta to break the world's endurance record, and later carried Chamberlin and Charles Levine across the Atlantic.

TOMORROW

demonstration was given at Fort Myer, Va.

According to the Wright Aeronautical Corporation's official history, the soldiers' reaction to the sight of an automobile towing a wagon (the Army specified this) upon which teetered the plane was a combination of shouting enthusiasm and good-natured disbelief:

"Soldiers on the post gaped at the wagon's cargo, another box-kite plane of fabric and windmill paddles and wires and braces balanced on runners, the whole thing overhanging both ends of the wagon and dipping and swaying with each jolt over a rut, so that it was easy to see why the team of skittish mules had been replaced by an automobile as tow power.

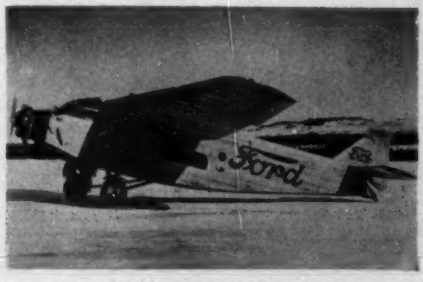
"Enthusiastic troops flocked around to help unload the wagon. There was the inevitable period of delay, of tinkering, tightening and testing, but finally there was a sustained roar and the troops were yelling in applause as the United States Army's first airplane sailed up over the Virginia countryside. As the plane left the ground, there was ended once and for all the controversy as to whether or not it was possible to fly."

Air Age Is Here

Yes, the curtains of the Air Age had been drawn wide open; for this was not the plane of Kitty Hawk which managed to stay aloft an even dozen seconds. This amazing flying machine could attain the breathless speed of 40 miles an hour, carry two passengers with a combined weight of 350 pounds plus adequate fuel for a 125-mile flight, and return to its take-off point after an hour in the air. These were the Army's specifications. So well did the plane meet them that the Wrights were paid the contract price of $125,000 for it and, in addition, a bonus of $5,000 for extra performance.

"The design, manufacture, flight test, and sale of that plane, after five years of work to utilize their 1903 achievement, was the first success in the long train of engineering and manufacturing sequences which led to the present existence of the Wright Aeronautical Corporation, builders of power," the history states.

THE IRON HORSE—Constructed in 1924, it was the first ship to be powered by Cyclone engines. The Iron Horse became one the of the first planes to be used exclusively for research and development, making test flights in 1927.



THE FLYING WASHBOARD—Getting its nickname because of its corrugated metal fuselage and wings, the Ford tri-motored transport, powered by Whirlwinds, was used by airlines during the late Twenties.

Aviation Takes Great Strides

Actually the inventors had every reason in the world to believe in their eventual success. They had put in years of preparation. The world's first wind tunnel was built by them. Their findings were proved a thousand times over with special glider flights. When they could not find in America and Europe an engine that weighed less than 33 pounds per horsepower, they built their own four-cylinder. 12-horsepower engine. It weighed only 13 pounds per horsepower.

Startling and invigorating as a plunge into cold water was the effect upon the Wright brothers when they found themselves suddenly transformed from aviation pioneers to aviation manufacturers. Aware that aviation depended upon its flyers, the Wrights took on the additional task of training pilots. One of their earliest pupils was a young and eager Army officer, Lieut. Henry H. Arnold.

Faced by the heavy demands for planes and engines, the Wright Company became a million-dollar corporation within a year. It was the direct forerunner of the present Wright Aeronautical Corporation.

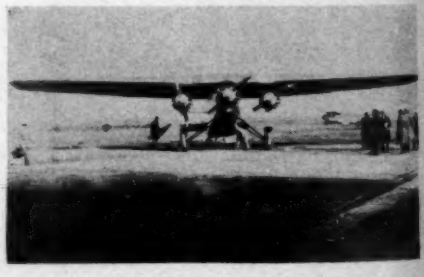
Aviation interest spread. Europe picked it up. New names appeared—names of flyers and manufacturers. Glenn Curtiss and Glenn L. Martin became recognized figures. Presently the United States Army's air arm was established. It was demonstrated that machine guns could be operated successfully from planes. Ground-to-plane wireless communication became a fact. Planes were able to land on ships. And when a plane crossed the continent in 84 hours, more aerial history was made.

Came the First World War. The Allies were badly in need of the famous Hispano-Suiza engines, and in 1915 Wright contracted to build them in large quantities. To facilitate production, the Wright Company and the Glenn L. Martin Company merged to form the Wright-Martin Aircraft Corporation. When the Armistice ended the war, production on the "Hissos" had been scheduled for 1000 a month.

When the overgrown Wright-Martin Corporation was found to be too big for the immediate post-war period, it was dissolved. The Wright Aeronautical Corporation was formed "to carry on primarily the building of engines." It moved to Paterson, N. J., in 1920.

The Whirlwind engine was the result of the development of the air-cooled radial engine. Its name crossed the airlanes of the world, powering planes flown by Boyd, Bennett, Lindbergh, Chamberlain, Levine, Earhart, Byrd, Balchen, Acosta, Hillig, Hoiriis, Boardman, Maitland, Hegenberger, Kingsford-Smith, Hawks, Schlee, and Brock.

WE—Possibly the best known plane ever built was the Spirit of St. Louis, J-5 Wright-powered Ryan monoplane, which carried Charles A. Lindbergh from New York to Paris for the first solo transatlantic flight.



BYRD AND WHIRLWINDS—Admiral (then Naval Commander) Byrd flew over the North Pole and later the South Pole in Wright-powered planes. Shown above is the ship which took Byrd and his crew across the Atlantic in 1927.

THE LOCKHEED CONSTELLATION—Early in January of last year, the United States Army Air Force suddenly unveiled the four 2,000 horsepower Wright-engined plane. Born as a luxury liner, it was quickly turned into an outstanding cargoplane. The Constellation has made a signal contribution in supplying our men on the warring fronts.

Other engines appeared: the Tornado, Typhoon, Simoon, Gale, Curtiss Conqueror, and Curtiss Challenger. It was in 1929 that the Curtiss Aeroplane and Motor Corporation was merged with Wright. Then, in 1933, this happened:

"A twin-engined transport plane took off from Winslow, Ariz., bound for Albuquerque, N. M., 216 miles away over some of the roughest terrain in the country. As the plane circle the airport, to get on course, one engine stopped. The plane sailed on. It kept on flying, climbing to gain the necessary altitude over the mountain. Less than two hours later, the transport landed at Albuquerque, on one engine.

"The apparent engine failure over Winslow had been a deliberate move on the part of the pilot. He had cut the switch and flown over that wild section of the Rockies to prove that a twin-engined transport had a full margin of safety, even with one engine dead. With equal deliberation, the pilot cut out one engine just as a take-off was started for a return trip to Winslow. The plane continued to gain speed and took off smoothly—with a full load. That plane was the Douglas DC-1, called the

THE SOUTHERN CROSS—In this plane the Australian flyer, Sir Charles Kingsford-Smith, won fame in a Whirlwind-powered Fokker during the late Twenties. He flew to Australia from America and England, and also circled the world.

MILLIONAIRE SPORTSMAN—In June, 1938, Howard Hughes sped around the globe in a Lockheed 14, powered by two Cyclone 9s, in three days, 19 hours, eight minutes, and 10 seconds. Today the RAF knows it as the Hudson.

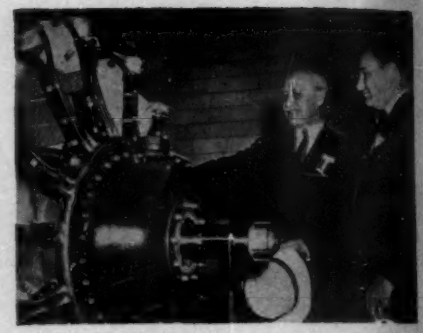
'grandfather of modern twin-engined transportation,' and it was powered by the Series F 9-cylinder Cyclone of 750 hp."

The World Grows Smaller

The G100 Cyclone was the thrumming giant in the Lockheed 14 of Howard Hughes which circled the globe in three days, 19 hours, eight minutes, and 10 seconds. That the Cyclones came to be accepted by practically all the major airlines is an established fact. It lopped off distances and time in gargantuan chunks. The continents moved nearer each other. International air commerce and transportation were given an invigorating shot in the arm.

Now Wright's engines are powering the giant bombers raining vengeance on the Nazis and Japs. But the planes that today are fighting to make victory and peace a reality will in the immediate Tomorrow be one of the strongest forces in helping to weld the far-flung nations into an organization based on common understanding. The exchange of needed products with the inevitable result of a raised standard of living will generate demand and also a wholesome respect for democracy.

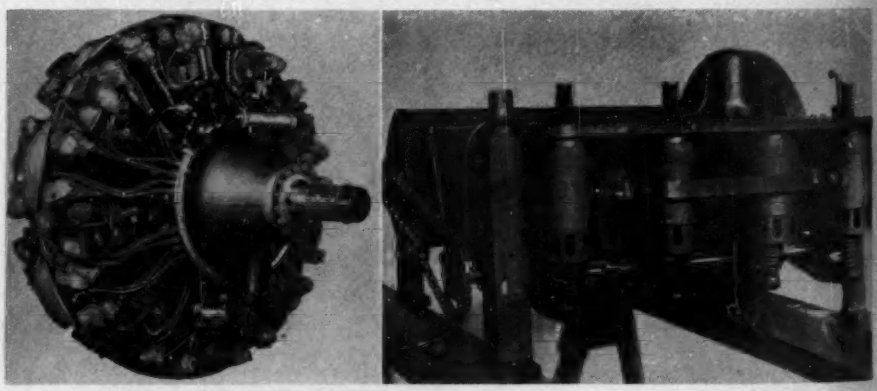
The Wright Aeronatutical Corporation's quarter-of-a-century has been spent usefully and well. Even now the company looks far ahead, envisioning the great work that is yet to be done. For, in their own words, they "are building not only for the quick end of a war but for the future, when commercial tonnage will be moved in great freighters and express transports, powered by Wright."



THE OLD MASTER—Orville Wright (left) is shown inspecting a Cyclone engine with G. W. Vaughan, president of Wright. Photo was taken more than three years ago at the dedication of the new Cincinnati plant.

Pointing up this policy is the recent announcement by Guy W. Vaughan, president, that Wright's expects to perfect within the next 10 years a gas turbine engine for aircraft of as much as 10,000 horsepower. The engines driving today's Superfortresses develop about 8800 horsepower.

Mr. Vaughan sees ahead to the near future when the giant transports will save as much as 8000 pounds over today's engine types, making available accommodations for the equivalent of 40 more passengers or space for four tons of extra cargo. In these advances and savings he sees lowered air tariffs.



VIVID CONTRAST—Wright progress cannot be better illustrated than these pictures of the old and new engines. Pictured on the right is the engine which made the first airplane flight possible. It weighed 13 pounds per horsepower and produced 12 horsepower. By its side is the Wright Cyclone 18, mightiest engine of any of America's warplanes. In its two banks of nine cylinders each, with a displacement of 3,350 cubic inches, it develops 2,200 horsepower.

Pan Am Seeks Additional Border Ports of Entry for International Traffic

The program of mass air transportation of Pan American World Airways, designed to bring foreign travel within the reach of the average man, will be extended directly to the middle Atlantic seaboard, to New England, and to the Great Lakes area, if an application submitted to the Civil Aeronautics Board is granted. The company seeks an amendment to its permanent transatlantic route by the designation of additional border ports of entry for international traffic at Baltimore, Boston, Chicago and Detroit.

Baltimore heretofore has been designated as a Pan Am terminal only when weather conditions made New York unsuitable. Pan Am has not been authorized to operate into Boston except for refueling or in emergency.

Border airports at Chicago and Detroit have never before been designated as ports of entry in transatlantic service. Pan Am service from these ports would be via the Great Circle Route to England and France with the port of call in Canada at Montreal. The land airport at Montreal would be substituted as Pan Am's port of call in Canada in lieu of Shediac regularly used heretofore by the transocean Clippers serving New York, which thereafter would make no stop in Canada.

The company holds permanent certificates to operate between New York and England, Eire, France and Portugal.

Planes Won't Affect Ports, Says Port Authority Chairman

According to Frank C. Ferguson, chairman of the Port of New York Authority, future air transportation will not affect seaports as great terminals for passenger and freight traffic.

Ferguson asserted that in spite of all the progress in the methods of transportation, people continued to travel from the same places to the same places, just as they did 100 years ago. He cited the fact that the Flying Cloud of 1851, the old clipper, required 89 days to make the New York-San Francisco run, whereas the same trip today was only a matter of a few hours.

"But we still go from one seaport to another," he said.

IT'S AN *Air* (Trade Mark) WORLD

By L. A. GOLDSMITH, *Economic Analyst*, AIR TRANSPORTATION

This is one of those *"as told to me"* stories—an eyewitness flight account from Australia. A young man on a mission from the United States, recently returned home. He had flown to Australia several months ago and reached home early this month. On both flights, outgoing and returning, the time of flying was approximately the same—50 hours!

Fifty Hours Flight From Australia to San Francisco, USA!

This young man, who will remain unnamed—we will just call him Mr. Y.M.—tells me that Australia is just around the corner for him. This is in direct contrast to the GI Joes who made the trip to Australia by a tedious journey of several weeks on an Army transport. They *know* that Australia is several thousand miles away and feel as though there might be millions of miles separating them from Main Street, U. S. A.

What a difference air transportation can make! Y.M. contemplates a return visit to Australia after the war *just* as if he were thinking of a short week-end trip. In fact, when he returned to the United States and it took him almost four days to cross our own continent by train, he had the dragging thought he was *crawling*. Compared with the exhilarating sensations of flying, the railroad trip seemed to him as slow as a pack mule instead of a modern streamliner.

Y.M. tells me that in making this almost unbelievable flight, it begins to seem incredible even to those making the trip. The magic carpet of the Arabian Nights had nothing on today's planes.

He went on to say, "You actually begin to doubt your own senses; it even seems impossible to credit the accuracy of the map which covers the actual route of your air-speeded travel." For instance, in explanation of the feeling that "it can't be possible and yet it is happening," he points out—when you look at a map of the Pacific Ocean, you see that it is practically peppered with as many islands as the red spots of a measles rash. And yet, he further emphasizes, there is the airplane zipping along at blinding speed flying for hours without so much as sighting a single island! Eventually, after five or six hours of flying, an island does appear as a tiny speck on that vast expanse of ocean. The plane comes down to refuel and off you go again.

Almost Unbelievable You Begin to Doubt The Accuracy of Maps

Y.M. was loud in his praises regarding the comfort of the reclining chairs in the plane in which he travelled. It was a regular commercial plane, but, of course, under Air Transport Command orders. So much so, he commented, that on the trip over to Australia they stopped over one night on a South Pacific island and the passengers were given Army cots on which to sleep. These Army cots were uncomfortable when compared with the real ease of the reclining chairs in the plane.

It is really as exciting to hear about this flight without experiencing it. What is more, it does make you stop and think that as soon as the war is over, such 50-hour flights will be commonplace, every-day affairs. Two-way flights for Australians to visit the United States and for us to visit them, for business or pleasure, will be almost like a commuting trip.

As for the economic advantages, think of the tremendous value it will be for some of our top-flight business executives who before could not possibly take the time to take a two months' trip to Australia, but who probably could take two weeks now—four days to go and return, and ten days for transacting business and pleasure. If two weeks should be too long to stay away from business in the United States, let us consider one week—four days' flying time and only three days to transact urgent business.

As for air cargo—right here and now cargo for war use is making the journey to and from Australia in as little time as 95 hours and 20 minutes. If you should want to have this flight of time corroborated, as not being a *flight of fancy*, let me refer you to an advertisement of the Consolidated Vultee Aircraft Corporation which appeared in a recent issue of *Time* magazine. Here are the highlights of that ad:

Air Cargo for Australia Even Now Going Forward There and Back - - In 95 Hours and 20 Minutes

"*12:00 Midnight, Sunday:* A huge Liberator Express, loaded with a secret cargo, roars down its California runway and soon dwindles to a speck on the horizon. The dispatcher checks off another routine flight for Consairway, the military airline established in 1942 by Consolidated for the Air Transport Command.

"*10:30 P. M., Tuesday:* The ground crew at an Australian Airport speedily unloads the Liberator's high-priority cargo . . . checks the engines . . . heaves aboard tons of mail for the U.S.A. A new Pony Express flight crew jogs out, climbs aboard, and the giant transport streaks down the runway for the return trip.

"*11:20 P. M., Thursday:* The Liberator contacts the control tower at its California airport . . . 'Consairway plane No. 10 coming in!' . . . and it's back home again. Since it left that same airport, 95 hours and 20 minutes ago, the land-based Liberator Express has logged 14,690 miles over the Pacific—to Australia and back!

"So far, Consairway Liberators have made 1764 round trips between the U. S. and Australia—a total of 25,900,000 over-water miles, without a single fatal accident. The original Liberator that pioneered the Australia run has now completed 84 round trips and is still going strong!"

ASTAA Meets in Atlantic City

The 14th annual meeting of the American Steamship and Tourist Agents Association is scheduled to be held in the Hotel Claridge at Atlantic City, N. J., on Oct. 27, 28, and 29. Headquarters of this association is located at Hotel McAlpin, New York City.

A travel forum will follow the election of officers for the ensuing year. President of the organization is L. B. Kinports of Gillespie, Kinports and Beard, Inc., N. Y. Fred H. Dietz is the executive secretary.

Convair President Gives Postwar Plan

Harry Woodhead, president of Consolidated Vultee Aircraft Corp., has urged the adoption of adequate unemployment insurance, transportation of workers to new jobs or bona fide homes, prompt contract termination, advance notice of cutbacks, speedy resumption of civilian aircraft manufacture, intelligent surplus aircraft disposal, and the continuation of college air training, as steps in a planned demobilization program which would affect more than 2,000,000 workers in the aircraft industry.

Experts Draw Up Plans For Ideal Feederliner At Parley in St. Louis

Main Features of Proposed Design are Revealed in Report by Oliver L. Parks

CORRELATION of the ideas of seven outstanding figures has resulted in the drawing up of specifications for a feeder airline plane. The men, who attended a session of the Technical Committee of the Feeder Airlines Association, met in St. Louis.

Attending were Oliver L. Parks, Parks Air College, Inc., chairman; Halsey R. Baxley, All American Aviation, Inc.; Colonel Herbert C. Fox, Southern Aviation Corporation; Bowman R. Otto, Otto Airlines; Eugene R. Scroggie, Ryan School of Aeronautics; Don V. Seevers, executive director of the Association and Phillip C. Wagner of Parks Air College.

Much consideration has been given to the important question of equipment necessary for the operation of feeder airlines. The committee had been picked by the members of the association to study this problem and to dovetail their ideas, many of which have been derived from actual feeder operation experience.

Although the committee did not attempt to present too detailed a list of specifications for the future *Feederliner*, it has definitely set forth the main features which must be embodied in the design.

Features for Feederliner

According to a report issued by Mr. Parks, the *Feederliner* must have the following features:

1. An all metal, high wing, twin engined monoplane equipped with complete instrument and night flying equipment, and full feathering propellers.
2. The capability of landing and taking off within 1,000 feet, fully loaded.
3. A cruising speed of 170 miles per hour.
4. A range of 500 miles plus the required reserve.
5. A maximum gliding angle of seven to one.
6. A tri-cycle landing gear designed to take care of 20 miles per hour cross winds.

The report further specifies that seating capacity be set at from 18 to 22 passengers at 200 pounds per passenger, including baggage. Baggage space would be so arranged that each passenger will be responsible for his own baggage, thus eliminating a checking system. Seating arrangement plans are such that seats will not need to be individually assigned due to load distribution.

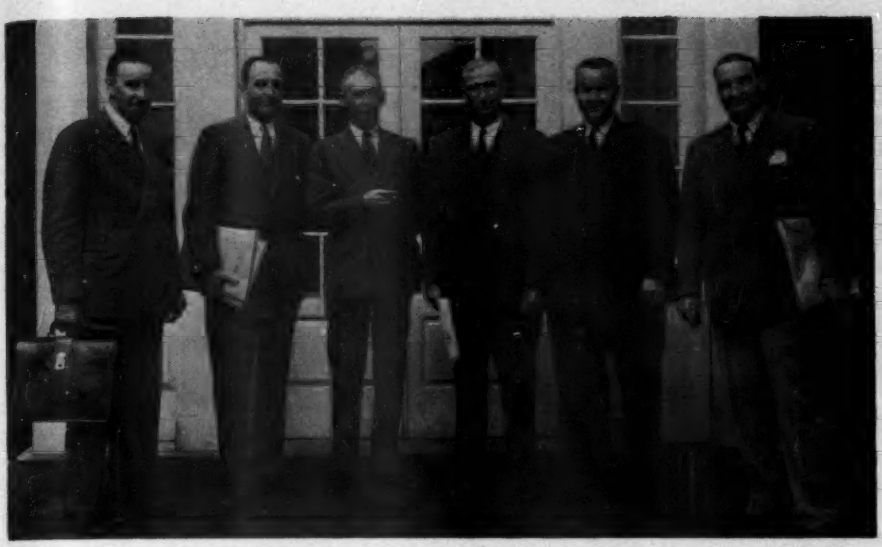
Cargo Limit Set

Cargo capacity is set at 2,000 pounds (including pick-up equipment if used). A movable bulkhead would be incorporated in the design between the forward cargo compartment and the passenger section in such a manner that seats can be removed and the cargo compartment enlarged in a period of time not exceeding 10 minutes for the entire operation. The last 12 seats in the passenger section would be permanently installed.

Size of passenger door 30 inches by 70 inches; front cargo door 60 inches by 60 inches; and rear cargo door 30 inches by 30 inches. All doors are to be on the left side.

The airplane would be so designed structurally that a pick-up unit can be installed at any time without structural change. It is stressed for a maximum pick-up load of 300 pounds using a unit similar to that used by All American Aviation. The complete pick-up unit will not exceed 100 pounds in weight.

Manufacturers are asked to keep in mind that all flying will be done at 500 to 1,000 feet above the surrounding terrain and that landings will be made on an average of every fifty miles. It is expected that, at the outset,



Shown above are six members of the Technical Committee of the Feeder Airlines Association which met in St. Louis to discuss specifications for the future Feederliner. *Left to right are: Don V. Seevers, executive director of the association; Oliver L. Parks, Parks Air College, committee chairman; Halsey R. Baxley, All American Aviation, Inc.; Eugene R. Scroggie, Ryan School of Aeronautics; Bowman R. Otto, Otto Airlines; and Col. Herbert C. Fox, Southern Aviation Corporation.*

at least 50 percent of the landings will be made on turf runways which will necessitate a rugged braking system and oversize tires.

More Features Offered

Other features of the *Feederliner* are an interior appearance and appointments equal to the DC-3; air conditioning, heating and cooling; individual reading lights, ventilators, and co-pilot call button for each seat; chemical toilet with wash stand; and drinking water supply.

With a goal of 60 seconds maximum ground time at each stop much thought was given to new ground equipment, and several time-saving features have been incorporated in the design of the airplane: under tank refueling; retractable passenger steps that will automatically lower into place when the passenger door is opened; and if possible, a minimum of eight bins under the floor, with individual outside self-locking doors provided for small mail and express packages destined for separate points enroute.

The Feeder Airlines Association is made up of 26 of the foremost operators of and applicants for feeder routes in all parts of the country.

LEGAL NOTES
on
Air Transportation

By GEORGE BOOCHEVER

Chairman, Legal Committee, Aviation Section, New York Board of Trade

THE United States Supreme Court, by a vote of five to four, recently handed down a decision of great importance to the air transportation industry (Northwest Airlines, Inc., v. Minnesota, 64 Sup. Ct., 950, 1944).

George Boochever

Northwest Airlines, Inc., is a corporation chartered in Minnesota, with its principal offices and overhauling base located in St. Paul, which operates interstate airlines, carrying persons, property and mail over schedule routes fixed by the Civil Aeronautics Authority, extending from Chicago to the West Coast.

St. Paul is listed as the "home port," but only 14 per cent of the air miles and 16 per cent of the plane miles were flown within the borders of Minnesota. The planes, except when being overhauled, were used continuously and interchangeably over the entire route. The State of Minnesota assessed and taxed all planes of the petitioner, at their full value, for the year 1939. The protest of the petitioner was overruled by the Minnesota Supreme Court, and the case went to the United States Supreme Court, on certiorari, to review the decision and to determine whether it denied to the petitioner due process of law, or violated the Commerce Clause of the United States Constitution.

The question was regarded as such a close one, that Mr. Chief Justice Stone, wrote a dissenting opinion, in which three other justices joined, their opinion being that on the facts, proportion of the planes had acquired a situs beyond the jurisdiction of the tax purposes, being permanently within the jurisdiction of the other states, through which the routes passed, and thus a tax on this proportion would be an undue burden on interstate commerce, inasmuch as it would subject that portion to multiple taxation merely because it was used in interstate commerce.

The affirming decision was written by Mr. Justice Frankfurter, three other justices concurring, and Mr. Justice Jackson wrote a concurring opinion. The opinion based the decision upon the rule that the domicile of the owner of the tangible personal property, so long as it has not acquired a permanent situs in another state, has jurisdiction to tax the property.

The concurring opinion of Mr. Justice Jackson, rested upon the analogy between airplanes and vessels, and selected as the most practical rule that formerly applied to vessels, making them taxable only at their home port.

This is the first case that has arisen concerning the taxation of interstate airplanes and it is also the first case, to present squarely the question of whether the domicile of the owner has jurisdiction to tax tangible movables, which are not permanently out of the state, in the sense of being located in any other, but are used in such a manner that other states acquire a right to tax an average portion permanently used in those other states.

Britain for New Pact On Global Air Flights

A government White Paper issued this month proposed a new global air agreement to replace the Paris Convention of 1919 and the Havana Convention of 1928 on international air transportation.

The paper stated that "the British Government desires to see a radical change in this situation after the war," and said the objectives of international collaboration should be:

1. To meet needs for plentiful, efficient and cheap air services.

2. To maintain broad equilibrium between the world's air transport capacities and the traffic offering.

3. To insure equitable participation by the various countries engaged in international air transport.

4. To eliminate wasteful competitive practices and, in particular, to control subsidies.

5. To standardize practice on technical matters important to safety of flying:

6. To contribute to world security.

California Spinach for Sale In Distant Stores in 24 Hours

ANOTHER milestone in air-truck transportation progress was chalked up recently when the first full planeload of produce to be moved by a commercial airline—a cargo of spinach—was flown from California to Ohio and Kentucky and placed on sale in retail stores within 24 hours from the time it was picked. This significant accomplishment was made possible by the new airfreight service of American Airlines plus the coordinated efforts of other transportation media.

The spinach was picked on the Sunny Sally farms near Los Angeles in the morning and rushed from the fields to the packing center by truck. It was steam-cleaned there and put up in 10-ounce cellophane packages to be conveyed by truck to the airport. A total of 8,000 packages weighing 5,000 pounds made up the complete load which was placed aboard the American Airlines airfreighter. The plane left Los Angeles at 7:00 p.m., West Coast Time, and arrived the following morning at Cincinnati, headquarters of the Kroger Grocery & Baking Co., chain store organization, at 7:20 o'clock Central Time. Enroute, the plane stopped at Louisville, Ky., to drop off 202 cartons for the Kroger stores in that area. It then discharged 225 cartons at Cincinnati and proceeded to Dayton where it delivered the remaining 240 cartons. The entire load

True to its name, this Flagship Airfreighter of the American Airlines (above) is discharging its cross-country cargo while a Model WA-20 White Super Power truck, owned by H. E. Swezey & Company of Eastport, Long Island, is on hand to effect the final transfer. Streamlining the 24-hour farm-to-shopper program are an Airfreighter and a Super Power truck (below). On Oct. 15, American Airlines instituted regularly scheduled airfreight service, linking 43 cities.

was contracted by the Kroger company and distributed to its stores by its fleet of White Super Power trucks.

Plane-Truck Coordination

At each city Kroger sped its trucks to the airport to pick up the important consignment. It was then delivered to the retail outlets by truck and was displayed for sale to the public the same morning it was received. Close coordination between trucks and plane made it possible to get the produce from grower to consumer in the 24-hour period. Actual transportation time was but 16 hours. When compared to the days and weeks it used to take for West Coast farm products to reach the eastern markets, the speed of this service is almost incredible.

Aboard the plane a temperature of from 40 to 50 degrees was maintained during the entire trip by keeping the right elevation in flight, thereby insuring the freshness of the cargo. The airfreight tariff filed by American Airlines with the Civil Aeronautics Board is said to have been the first complete airfreight tariff ever filed by an airline with the U. S. Government.

This pioneering, full-plane movement suggests a strong future trend in this direction. Actually, this was one of the preliminary air-cargo flights made by American Airlines prior to regularly scheduled airfreight service over the system which began October 15, linking 43 cities. With fast trucks, such as the White Super Power vehicles employed by Kroger, to speed the perishables from farm to packing plant to airport, and other trucks to rush the plane's cargo from destination port to wholesale and retail outlets, housewives can be assured of fruits and vegetables in the finest condition. Such service closely links the western growing areas with the big eastern markets, with special advantages to all concerned.

TWA Stratoliners Now Ready For Overseas Flights, Frye Tells CAB

Proposes 7-Day Service With Slashes In Passenger Fares and Cargo Rates

JACK FRYE, president of Transcontinental and Western Airline, is prepared to start now rather than after the war seven inexpensive round-trip flights weekly from New York to London, it was made known earlier this month. In addition, Frye declared that TWA can open flights to Paris, Cairo, Calcutta, and intervening stops, with the five Boeing Stratoliners recently returned to the airline by the Air Transport Command. Application has been filed with the Civil Aeronautics Board.

At the present time the returned Stratoliners are being remodeled and reconditioned at the Boeing factories at a cost of $390.000 each. The original cost of each was $325,000. Mr. Frye offered the explanation that improved equipment and increases were not the only causes for the rise in cost, but mainly because each plane will be virtually a new machine when it leaves Boeing.

Jack Frye

Before the war the Stratoliners were used on the New York-Los Angeles run. Mr. Frye asserted that TWA was the only airline having equipment today suitable for overseas service.

Flying Fort Equipment

He revealed that each of the Stratoliners is being equipped with Flying Fortress wings, motors, and tail surfaces. Only the fuselage is retained. If the CAB will grant TWA a permit, Mr. Frye said, service can be started in December. But opposition is expected from Pan American which has made application for almost the same route.

Each Stratoliner seats 36 passengers, and, in addition, can haul a ton of mail and express. The proposed fare from New York to London is approximately 60 percent below the present fare of $572 per passenger for a one-way trip—$263.80. TWA's proposed rate is 70 cents a ton-mile, compared with a prevailing rate of from 85 cents to 90 cents.

New York to Paris fares would be $277; to Cairo, $428; and to Calcutta, $699.40.

AVIATION AND FOREIGN TRADE

Air power, Mr. Wilson says, is of a revolutionary character, for its economies in transport "will become a factor in the future." Air transport, he adds, is a key to a nation's foreign policy.

By EUGENE E. WILSON

Vice Chairman, United Aircraft Corp.
Chairman, Board of Governors,
Aeronautical Chamber of Commerce of America

THE performance of air power in this war brings into sharp focus its truly revolutionary character. I use the expression "air power" not in the usual, narrow connotation of air force, but rather in its broader aspect. Here we can keep in mind the parallel with sea power, the influence of which was first set forth in history by Captain A. T. Mahan, U.S.N., back in 1889. To Mahan, Neptune's three-pronged trident comprised the merchant marine, the navy and the shipbuilders. Neptune stood on two firm foundations—naval bases and a maritime tradition.

Similarly, air power comprises five elements. Its heart is air commerce; its sinews air force; its backbone aircraft production. It depends upon air bases and airmindedness. Great Britain is an outstanding example of the maratime tradition, while the United States is singularly airminded. From the birth of the airplane, Americans have supported aviation and advanced its technology.

While the Air Forces have provided the spectacular performance of this war, the really significant development is the extraordinary expansion of air transport. Our magnificent pre-war domestic air transportation system diverted a large part of its best aircraft to relieve shortages in the armed services, and then went on to swell its own volume by improved operating technique.

These same organizations turned their skills into the foreign field, and soon were operating overseas services in all directions. Lending certain of their personnel to the armed services, they helped to establish and expand the Air Transport Command and the Naval Air Transport Services to tremendous proportions. American air transport played, and continues to play, a vital war role on the transportation of key men and critical materials, without which many of our successes surely would have been denied. The mobility and flexibility of air transport overcame some of the disadvantages of operating only on exterior lines. Its incredible performance has had a vital influence upon the outcome of the war and has repaid over and over again every dollar invested in it.

These facts now being well established, our thoughts turn to the question, "What may we expect in peace?"

Air Transportation Economics

Here, we come face to face with cost as a fundamental consideration. War places such a premium upon time that cost becomes a secondary consideration. Peace places such a premium upon cost that time must be weighed in the scales of economics, rather than strategy or tactics. This makes the economics of air transport a matter of paramount importance.

To appraise this consideration, we first view the airplane as a vehicle. We find that unlike a surface vehicle, which is supported against the force of gravity by the surface on which it rolls, the airplane must utilize power to support itself in its medium. Power costs money, and the airplane as a simple vehicle is an expensive form of transport. As an example, it has been pointed out that if 100,000 tons of bulk goods were to be shipped by air from San Francisco to Australia, more merchant tonnage would be required to ship the gasoline needed to move this volume by air than to ship the goods alone by water. This is an extreme case since it compares high-speed air transport with the cheapest form of transport —slow hauling by boat. Moreover, it reflects the uneconomic conditions under which aircraft fuel now must be shipped to Australia.

Yet the fact remains that cheap bulk goods travel most economically by water. Thus, endless time or some other consideration is in-

volved, air transport cannot compete in the carrying of bulky, inexpensive materials. For many other types of materials transportation by air is practicable. Experiments are now under way in the United States with the transport of perishable foods direct from distant farms to selected users. All other possibilities of air express and air cargo are being investigated. For such service it is necessary to design new aircraft types; high-speed mail and passenger craft cannot perform the job efficiently and cheaply.

We note that goods produced adjacent to an airport may be flown overseas and delivered to a customer located close to an airport without the expense of intermediate handling. This saving in handling costs has been demonstrated frequently in the aircraft manufacturing industry where plants have their own airports. This economy will become a factor in other fields in the future.

Time an Important Factor

In the case of passengers, the time factor affects not only the busy man, but vacationists and tourists as well. War must not confine our study of costs to narrow limits. The construction of rights of way and their maintenance are important cost items in surface transport. The right of way of the airplane is the free air. If this is taken into consideration, as it must be when new routes are opened up, such as might occur in Russia or Alaska, the true over-all costs may favor air transport.

In general, the airplane is complementary to land and water transport, rather than competitive. The two forms compete only where they overlap. The rapid development of domestic and international air transport under United States leadership is the direct result of sound national policy.

Care was taken in the United States to divorce air transport from military or naval control. The opposite course was followed in England, where air transport was administered under the Air Ministry. The great difference between the progress in the two countries was disclosed by a Royal Commission which met in 1938, under Lord Cadman. It pointed out the backward state of British development under government directors. In the United States where air transportation development is superior to that of any other nation we have had the benefit of keen competition among private operators.

However, this competition has been unique in that it has been accompanied by intelligent government regulation under the CAB and the CAA. This has stimulated performance under private ownership and management and avoided destructive price competition. The best evidence of the benefits of the process is the great healthy domestic air transport system of the United States of America. We already have seen how this competent transport system served the nation in the emergency, and paid for itself over and over again. But it was economically sound in another way.

The Author

As wartime chairman of the Board of Governors of the Aeronautical Chamber of Commerce of America, Eugene Edward Wilson is one of the key individuals in the nation's Air Power. In his 57 years of life, Mr. Wilson has been successful in two careers: as a Navy officer for 25 years, and as an aircraft manufacturer for five.

He was born in Dayton, Wash., in 1887, was appointed to the Naval Academy at Annapolis and commissioned an ensign in 1908, and served as chief engineer of the Battleship U.S.S. Arkansas in the North Sea in World War I. After the war, as a lieutenant commander, Wilson directed the Aviation Mechanics School at Great Lakes Naval Training Station.

His work carried him into the Navy's Bureau of Aeronautics where he became chief of the engine section and won a commendation from the Secretary of the Navy for his work in the development of the air-cooled airplane engine.

He learned to fly, and later was made chief of the design section of the Bureau of Aeronautics. Promoted to commander, he served two years as Chief of Staff of the Aircraft Squadrons Battle Fleet, composed of the carriers Langley, Saratoga, and Lexington.

He resigned his commission in 1930 to enter the aircraft industry with United Aircraft Corporation, of which he was made president in 1940 and vice chairman in 1943. The Aeronautical Chamber of Commerce selected him as its head in April, 1944.

Subsidies Not Needed

After the domestic airlines got on their feet, they no longer needed subsidies. It appears from data prepared by the Post Office Department that the public treasury realized a profit from the airmail system over the 14 years from 1930-1944. During that time the revenues from airmail exceeded the payments to the air carriers by almost $60,000,000. This profitable service actually helps to support other postal services which operate at a deficit. Thus, we have clear proof that under sound policy and intelligent administration, air transport not only can be self-sustaining, but also can improve our standards of living. It has competed successfully with well-established surface forms and provided superior service.

We are reminded here of the analogy of the transcontinental railways. Few of us know, and others have forgotten, how, as a part of

the Civil War reconstruction program, the United States Government practically forced the construction of the transcontinental railways. And what dividends this paid! In addition to the wealth and employment that flowed from the opening up of the Far West, rebates to the Government from land grant roads have reached vast sums. This year alone, such rebates will approach 350 million dollars, and this has been going on for a long time.

This serves to illustrate the potential economics of air power. Aviation's future cannot be judged by its present state of development. We are on the threshold of striking technological progress. Those who think of ours as a mature economy have little understanding of the dynamics of technological development. Even as our latest Superfortress bombs Tokio, the "buzz-bomb" crashes into London and hints of even more startling things to come. Technological change is the catalyst of the dynamic system under which we can progress —provided we recognize its possibilities and map its course.

Influence on Foreign Trade

From the foregoing, it is clear that the influence of the airplane on foreign trade is bound to be profound. Freedom of communication is a fundamental requisite of trade. Increased trade follows new forms of communication, and prosperity is promoted. Thus, we see air transport as a basic factor in a nation's foreign policy. We see, also, that a nation's domestic policy controls the expansion of its air transport.

A national policy which encourages sound economic development along the lines which have fostered American air transport, must be based upon a cooperative attitude of Government toward business.

The airplane's characteristics are such that it can be either destructively annihilating or superhumanly beneficent. If national policy directs aviation along sound commercial lines, it will exercise a profound influence for the peace and prosperity of the world. Many benefits are available to us if we but choose to use them. Here is a new instrument of limitless potentialities, but we must master it lest it destroy us.

Today the United States has the dominant air power. Our air forces are unexcelled. Our air transport has reached incredible proportions. Our aircraft manufacturing establishment is the World's Number One Industrial Giant. This places in the hands of another free people a great force for peace.

However, we cannot take it for granted that the "air age" will develop automatically. Few realize that the vigorous, capable, imaginative aircraft industry, the backbone of U. S. air power, is even now in dire peril. The very magnitude of its war expansion multiplies its problems of reconversion. Its problem is one of survival. To assure survival of an aircraft industry adequate for the nation's needs will require courageous administration of recent legislation dealing with reconversion.

No Mass Production

At this point, let us keep in mind that no "clouds of aircraft" are likely to darken the skies. The whole United States domestic air transport system required but 360 21-passenger aircraft before the war. If we assume a five-fold expansion in five years, 1,800 airplanes of this type would serve. But larger and more economical craft are already in service. So we do not anticipate mass production of aircraft in either transport or private flying in the sense that automobiles are mass-produced. The speed and mobility of aircraft makes it possible to handle volume transportation with relatively few planes. This is further evidence of the economies of air power. Safety and other considerations make aviation a quality rather than a quantity business.

Two wars have greatly accelerated technological progress in aviation. We are still only on the threshold of new advances. Air transport is already economically sound. Under intelligent direction it creates new employment, new wealth, new opportunity for investment. Thus, it improves living standards.

Air power is at once the symbol and the instrument of Liberty. Air Forces unrestrained by Maginot or Siegfried Lines, have converted warfare from the static to a fluid state. If artificial transportation restrictions are lifted, if man-made obstructions are removed, if the free-play of natural economic forces are permitted to function and if air transport is permitted to employ its inherent mobility and flexibility in conjunction with other forms of transport, air power will become the new catalyst of a dynamic new era. It will once more disprove the defeatest philosophy of the "mature economy."

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5 Planes Form Paraguay Line

Five airplanes will be delivered to the Paraguay Department of Commerce to form the nucleus of a national domestic airline for the transportation of passengers, mail, and freight. Organization and operation of the line has been detailed to the Commander of the Air Force, who will serve as president of a board consisting of three additional members.

The Air Command will furnish navigating personnel, fuel, and other necessary facilities for the first half-year of operation. Exemption of payment of all Government and municipal taxes has been granted the airline.

Alcoa Develops Landing Mats Half the Weight of Older Steel Ones

New Aluminum Mats Are the Airborne Type; New Headache for Hirohito

THE urgent need for lightweight airplane landing mats which can be flown to places inaccessible to heavy equipment has been met through the development of an aluminum mat. This mat, weighing one-half as much as the older steel mat, will pave the way for the bombing of Tokyo by making more readily possible the construction of advance air fields in China, Burma, and the islands of the Pacific.

Contracts for the manufacture of aluminum mats have been let by the United States Corps of Engineers through the Procurement Division with the United States Gypsum Company, Chicago, Ill., and the United Steel Fabricators, Wooster, O. The contracts call for 12,000,000 square feet of landing mat, in the construction of which more than 45,000,000 pounds of aluminum will be used.

The aluminum landing mat is built up of a large number of sections, called "planks," each approximately 15 inches by 10 feet. The planks are ribbed and pierced with flanged holes for increased stiffness. The flanged holes also make for a lighter mat. Assembly of the planks into a landing mat is effected by fitting adjacent planks together by means of a slide lock, known as a "bayonet lock."

Aluminum Company of America was requested by the Engineers Corps to work with the contractors currently producing steel landing mats and develop a suitable lightweight

This GI may be described as a satisfied soldier. He is shown carrying one of the new aluminum planks weighing only 35 pounds. Before Alcoa developed the new lightweight landing mat, this soldier sweated carrying steel planks weighing 70 pounds each.

mat without sacrificing any of the strength characteristics of the steel mat.

After exploring the forming possibilities of a number of the strong aluminum alloys, Alcoa had made up sample mats in what it considered the proper gauge sheet of several of the most promising alloys. These sample mats were tested by laying the assembled planks on soft, clay soil which had been partially smoothed out by means of a bulldozer and running heavily loaded trucks over them to study their performance under load. The best alloy and gauge material were determined and additional mats were made which the Army tested first under truck load at Vicksburg, Miss., and later, on a landing field at Eglin Field, Fla. In the last test, airplane landings and take offs were made on the mats.

The design of the aluminum landing mat is quite similar to the steel mat. The sheet in the aluminum mats is Alcoa 61S-T alloy, 0.188-inch thick, having a yield strength of 35,000 pounds per square inch; while the sheet in the steel mats is SAE 1010, 0.134-inch thick, and having a yield strength of 33,000 pounds per square inch. By increasing the thickness of the aluminum sheet approximately 40 per cent over that of the steel sheet the same stiffness, or rigidity, was obtained as in steel, yet because of the light weight of aluminum, the aluminum sheet weighed only one-half as much as the steel sheet.

The planks in the aluminum mat weigh approximately 35 pounds each; while the same size planks in the steel mat weigh 70 pounds.

The aluminum mat is not designed to replace but to supplement the steel landing mat program. Its highly portable feature will prove exceptionally valuable in those sections where transportation is extremely difficult or speed is imperative. The planks for the aluminum mat can be flown to advance bases and readily assembled because of the light weight of the aluminum planks.

Planes a Big Help in Winterizing Soldiers

Peacetime potentialities of the cargoplane were never better illustrated than the following incident which the United States Army divulged on Oct. 13:

A sudden spell of cold weather caught the summer-clad GIs fighting on the perimeter of Germany unaware. The "winterization" of the troops took only 10 days—an outstanding wartime feat. Aircraft were credited with rushing 41 per cent of the extra-warm clothing for the soldiers.

WAS a time when a sky hook was a handy myth for use by wags on the more gullible. The sky hook fell naturally into the class of rubber tent pegs, striped paint, and left-hand monkey wrenches.

But the sky hook is no longer a gag. Currently under test by the miscellaneous equipment branch of the Air Technical Service Command's personal equipment laboratory at Wright Field, the sky hook is actually a rotary wing container for emergency supplies, cleverly adapted in shape for a method of descent similar to a falling maple seed.

Battlefront reports to the AAF of difficulties in accurate parachute delivery of emergency supplies from low altitudes, fostered development of the sky hook. Parachutes, subject to wind drift, are inaccurate from safe heights. A device which would provide accurate aerial delivery from high altitudes was required—and Yankee ingenuity, plus the maple seed, may provide the solution.

The sky hook's major wartime use may be as an emergency supply kit for units isolated in combat. Post war uses include its employment as a device for aerial delivery of mail.

Approximately 65 pounds of food, medicines and other emergency supplies may be packed in the bulbous plastic container, roughly eight inches deep and 20 inches in diameter, which is the counterpart of the maple pod. The wing or blade of the sky hook, approximately one foot wide and three feet long, is a flat wooden frame covered by airplane cloth.

Released from a plane in a flat position, the sky hook spirals to the earth in a flat spin around its own center of gravity at an approximate speed of 35 feet per second—slightly faster than a parachute. Drift is negligible and accuracy greater.

The sky hook has popped up as a reality. Adapted in shape and method of descent from a falling maple seed, it is designed for use in dropping emergency supplies more accurately than with a parachute. One postwar possibility is the sky hook's employment in air mail delivery. Examining it is Lieut. Col. Verne Stewart of Wright Field.

Parks Air Transport Incorporated; CAB Has New Application

The incorporation of Parks Air Transport, with $3,500,000 authorized capital stock, was officially announced, and it will have $2,000,000 paid-in capital to develop the airline project being organized under the direction of Oliver L. Parks. An application is pending before the Civil Aeronautics Board under the name of Parks Air College, of which Parks is president, asking for authority to operate 35 routes covering 14,769 miles in 15 states in the central region of the United States. Parks Air Transport, Inc., will file request to be substituted for the college as the applicant in this case.

The incorporation is under the laws of the State of Nevada. The legal steps were handled by Leonard Savage, Oklahoma City lawyer, also a member of the board of directors.

Officers are: Oliver L. Parks, president, East St. Louis, Ill.; Philip C. Wagner, vice-president and general manager, St. Louis, Mo., and John W. Bryan, secretary-treasurer, Sikeston, Mo. The directors are: Edward C. Muckerman, St. Louis; Fred C. Parks, Belleville, Ill.; Joseph L. Mathews, Sikeston; D. Edgar Fletcher, Arcadia, Mo.; Oliver L. Parks and Philip C. Wagner.

Goodyear Asks CAB to Consider Possibilities of Dirigibles in Foreign Trade

The Goodyear Aircraft Corp. had before the Civil Aeronautics Board a petition urging that it consider the possibilities of dirigibles in the international air commerce.

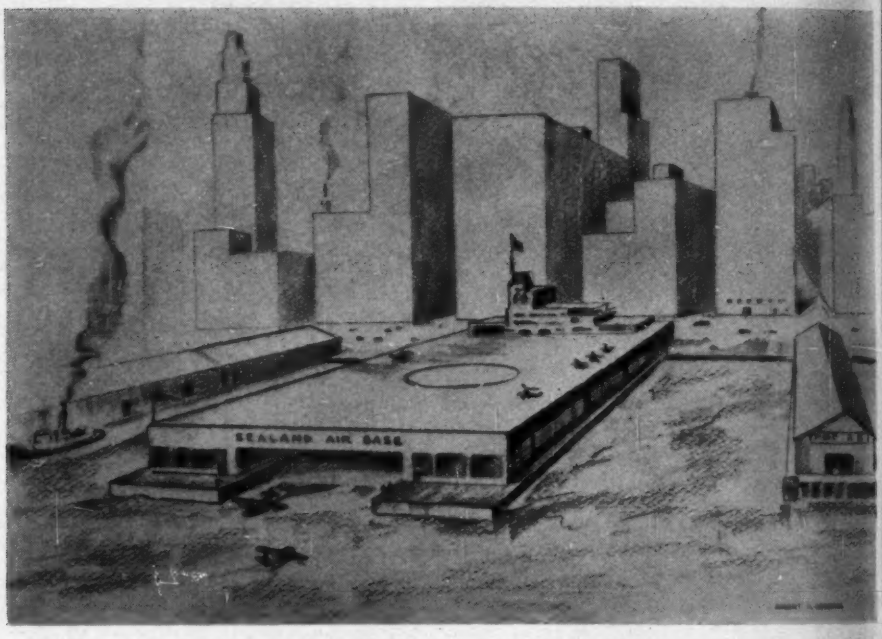
The company filed a memorandum asking CAB to "take no action which would prejudice eventual inclusion" of lighter-than-air ships in postwar freight and passenger operations between this country and the rest of the world.

The board is conducting hearings on applications of airlines and steamship companies for international air routes.

W. P. Litchfield, president of the Goodyear company, said the dirigibles would "supplement" the airplane and steamship in international trade, thus giving the United States "a service impossible to any other nation."

(*Trade Mark*)

Skyports for Manhattan Get Trade Board's Endorsement



In the architects' conception of P. H. Spencer's ideas, two piers on the Manhattan waterfront have been converted to provide landing and service facilities. The upper level is expressly for helicopter operation with 117,000 square feet of landing and parking area. The parking area provides space for approximately 25 helicopters or amphibians in addition to the landing area. Included in the building area are a waiting room, restaurant, administration and operation office, control tower, elevator platform, and service facilities. Deck level is 17,500 square feet and the second floor 8750 square feet.

The lower level is estimated to house conveniently 50 medium-size 40-foot-span amphibians, seaplanes, and helicopters. There are 150,000 square feet of overall dock area. The enclosed area of the building reaches 138,000 square feet with overhead clearance 20 feet. Storage and parking area are 101,600 square feet, while 21,500 square feet are devoted to service, drive, elevator lift, and maintenance shop. The architect, Robert H. Edwards, is on the staff of Republic Aviation. He is well-known in New York building circles.

[For text of story see following page] ——→

THE Aviation Section, young but vigorous operating unit of the New York Board of Trade, has endorsed and sponsors the proposal of P. H. Spencer, assistant chief commercial project engineer of Republic Aviation Corporation of Farmingdale, N. Y., for the establishment in Manhattan of skyports to provide parking space and service facilities for amphibians, seaplanes, and helicopters.

In making this announcement, John F. Budd, chairman of the Aviation Section and publisher of AIR TRANSPORTATION, said:

"The immediate postwar future will demand for the private airplane owner and user, the same facilities as had to be provided for the automobilist when the auto reached its heyday following World War I. Highway traffic congestion, loss of time and vast waste of money which occurred in every city resulted from a lack of adequate planning for the surface motor vehicle. Acceleration of air traffic from experience of this war and the certain forthcoming widespread use of private planes, the city is urged to immediately plan and provide these facilities."

Spencer Incorporates Ideas

Mr. Spencer, pioneer pilot designer and builder of amphibian aircraft, submitted sketches showing his ideas of what New York needs to take care of the private flier, the business man, or visitor.

"I have landed in the East River hundreds of times and taxied into landings at the foot of Wall Street and also at 23rd Street," said Mr. Spencer, "but there was no provision for staying there. Big planes can discharge passengers and take off, but the private flier wants to leave his plane just as the automobile driver does his car or the motorboat owner his water craft.

"I believe that Commissioner John McKenzie, head of the Marine and Aviation Department, who, like Mayor LaGuardia, is airmided, will find at the waterfront on the East and the Hudson Rivers just the place to convert some existing docks into ramps and parking areas for planes, or a place to build such facilities by fill-ins along the East River Drive."

The engineer said that before the war some 25 to 30 patrons used the Wall Street skyport daily, landing from large planes; but with the small, low-priced amphibians, seaplanes, and helicopters coming into production for post-war delivery, a very large patronage is in prospect.

He called New York City the Sky Capital of the World, giving full credit to Mayor LaGuardia who was described as a World War I pilot and air-minded.

The commercial version of the C-46 Commando is the CW-20 now on order by Eastern, Pennsylvania-Central, and National Airlines. It is designed to meet the needs of medium-range traffic and incorporates many innovations.

Washington and Jefferson look on benignly as Capt. Eddie Rickenbacker, president of Eastern, and C. W. Vaughan, president of Curtiss-Wright, examine a plane model after affixing signatures to Eastern's $25,000,000 expansion order.

Both Eastern and PCA have placed orders for the DC-4 which the Army knows as the C-54. The DC-4 is another plane that is high on the list of commercial aviation.

Three New Contracts Total 40 Million; Eastern, National, PCA in Big Expansions

WHEN Capt. E. V. Rickenbacker, president and general manager of Eastern Air Lines, signed a contract with C. W. Vaughan, president of Curtiss-Wright Corporation, earlier this month, it was the first step in Eastern's $25,000,000 expansion program. Similarly, expansion orders were signed by officials of Pennsylvania-Central Airlines and National Airlines.

The PCA program, which calls for expenditures of $10,000,000, was started when signatures were affixed to a contract by C. Bedell Monro and J. H. Carmichael, respectively president and vice president of PCA, and Donald Douglas, president of Douglas Aircraft. National Airlines placed an order for a $5,000,000 fleet of CW-20 Commandos, negotiations completed between G. T. Baker, president of the airline, and Curtiss Wright officials.

Eastern's order also calls for a new fleet of CW-20s. It is reputedly the largest twin-engine transport in the world. The new Commando will be equipped with 18-cylinder Wright Cyclones, the engine powering the B-29 Superfortresses, the Lockheed C-69 Constellation, and the famous Martin Mars.

These cargoplanes are now being flown extensively over the world. The bulk of traffic flown over the Hump between India and China has been carried in these planes.

The first plane of a fleet of 16 will be received by National in the summer. Eastern has already stated that it hopes to begin operation of the Commandos by the fall. These

transports accommodate 42 passengers and have a cruising speed of 240 miles per hour.

Four-engined Douglas DC-4s are also on order by Eastern and PCA. This plane is the commercial version of the Army's C-54. It is known that Capt. Rickenbacker hopes to place the DC-4s in service shortly after the Commandos begin operations.

PCA President C. Bedell Monro (right) signs a contract initiating the airline's $10,000,000 postwar program. Donald Douglas, president of Douglas Aircraft, and PCA Vice President J. H. Carmichael participate in the signing of contracts.

UNITED FRUIT GIVES CAB NEW EVIDENCE ON SHIP-AIR SERVICE

William K. Jackson declares New Orleans-Central America service is inadequate; asks 2 new routes

THE establishment of co-ordinated ship-air service is so strongly established in the plans of the United Fruit Company that it has filed new evidence and exhibits supporting its original application with the Civil Aeronautics Board to inaugurate two such routes out of New Orleans to Central America and Cuba. No operating subsidy from the Government will be required.

Approval by CAB of the company's application for certificates of convenience and necessity would result in the establishment of two schedules, each providing six-days-a-week service in modern, speedy, four-motored planes. The first schedule calls for parallel ship-air service from New Orleans to Guatemala, with a connecting service six days a week to Panama via the principal cities and many of the ports in Guatemala, Honduras, Nicaragua, Costa Rica and Panama. The second route applied for by United Fruit is from New Orleans to Havana, Cuba, with an extension to San Juan.

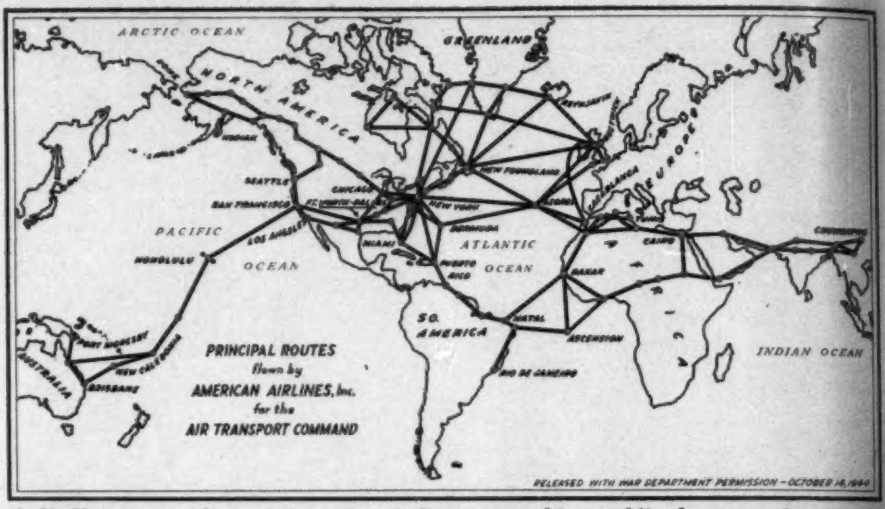
The company's new exhibits were presented by William K. Jackson, vice president and general counsel. They point out that present air service between New Orleans and Central America is inadequate and that establishment of the new route would provide fast service linking New Orleans with all the principal points in Central America.

"For the past 35 years," Mr. Jackson said, "United Fruit has maintained a fast, depen dable freight and passenger service from New Orleans via Havana and from Atlantic ports of the United States to various ports of the West Indies, Colombia, the Canal Zone and Central America. Havana is a natural interchange point between air and steamship travel originating in or destined to points in the United States or the Caribbean area. A frequent service between New Orleans and Havana will permit the Company to provide transportation partly by airplane and partly by steamship, with connecting schedules at Havana and with joint or through rates, so that the traveling public may utilize the advantages and economies of mileage time and expense inherent in a coordinated use of these two means of transportation."

United Fruit's presentation to CAB makes it clear that the use of its entire fleet by the Government for war purposes has radically changed the outlook for rapid resumption of service when peace is restored. Twenty of its ships have been lost in war operations. Permission to use correlated air service will help ameliorate the deficiency in service since airplanes and trained operating personnel will be readily available, Mr. Jackson said.

"The war has tremendously increased air consciousness of the traveling public," Mr. Jackson stated. "Various estimates have been made, but it is generally conceded that within five years steamships will have lost to the airplane from 50 to 80 per cent of their present passenger travel."

He pointed out that his company was adequately equipped to begin coordinated air operations as soon as permission is granted by the Civil Aeronautics Board. A complete chain of radio stations is already operated by the company and this could be utilized at once for air operations. Experienced staffs of experts in all matters of passenger transport in the Caribbean area have been maintained for many years and in other ways the coordinated service could be inaugurated with marked savings that would be passed on to the public.



A. N. Kemp, president of American Airlines, in making public figures embracing the line's overseas operations during the past year, revealed that 11,634,309 miles were covered in transoceanic flight. It is Mr. Kemp's contention that he can convert to peacetime commercial service on only 24 hours' notice. "Our flight crews and operating staff are currently operating an average of seven round trips per day over the North Atlantic," he said, "and in the 12-month period from Aug., 1943 to July, 1944 alone our pilots have flown a total of 61,505 hours and 25 minutes over that ocean." Mr. Kemp added that since April, 1943, American Airlines has flown contract flights to six continents, serving 33 countries. All operations with the exception of the trans-atlantic trips have been discontinued, he said.

***CHATTING FOURSOME**—Daniel H. Ecker, secretary-treasurer of the Aviation Section of the New York Board of Trade, is giving vent to a hearty laugh as John F. Budd, editor and publisher, and chairman of the Aviation Section, strikes home a point during an informal confab at the Hotel Biltmore, New York. Mr. Budd addressed the Lions Club at a luncheon here on October 3. Left to right are Mr. Ecker; Gilbert McKeon, assistant to the president of the Manhattan Storage and Warehouse Company of New York; Mr. Budd; and H. J. Lyall, Eastern traffic manager of American Airlines.*

***EXECUTIVES COMPARE NOTES**—Among those who heard John F. Budd address the Lions Club at the Hotel Biltmore in New York were (left to right) J. T. Wilson, world trade manager of International Business Machines Corporation; Kinsey N. Merritt, general manager of public relations, Railway Express Agency; Charles L. Dougherty, president of Carter and Weekes Stevedoring Company; and Lyle C. Ray, vice president of the Aviation Packaging Company.*

TO Myron B. Gordon, formerly the vice president and general manager of Wright Aeronautical Corporation and a vice president of Curtiss-Wright Corporation, who has been elected a director of Fairchild Engine and Airplane Corporation and appointed vice president in charge of operations.

Myron B. Gordon

It was in 1929 that Mr. Gordon was named secretary-treasurer of Wright Aeronautical. He became vice president and general manager six years later and directed the great expansion of facilities and production of Wright engines. Among the developments he supervised were the 14- and 18-cylinder Cyclone engines, a turbine supercharger, the forged cylinder head, and the adaptation of the Whirlwind engine to power Army tanks.

Fifty-two years old, Mr. Gordon graduated from the University of Cincinnati in 1916. He attended the School of Military Aeronautics at Massachusetts Institute of Technology in 1918. Fairchild's new director is a member of the American Society of Mechanical Engineers, the Society of Automotive Engineers, the Institute of the Aeronautical Sciences, and the National Association of Cost Accountants.

Beginning his career in the patent department of Westinghouse Machine Company, Mr. Gordon served in the First World War as a lieutenant in the aviation branch of the Signal Corps. After the Armistice he returned to Westinghouse.

In 1920 he joined the staff of C. E. Knoepple and Company as an industrial engineer, later switching to Lybrand Ross Brothers and Montgomery for which concern he made industrial investigations and reports on simplified methods, production controls and other managerial problems.

Mr. Gordon became comptroller of Seth Thomas Clock Company in 1924. He left that position a year later to go with International Combustion Engineering Corporation.

TO C. Edouard Houriet, assistant to the operations superintendent at the La Guardia Field headquarters of Pan American World Airways, on his completion of 15 years' service with the company.

C. Edouard Houriet

Quite in step with the international character of his organization, Mr. Houriet started out in life as a Swiss chemist for a West Indian sugar corporation in San Domingo. He received his education at the Federal Polytechnic School in Zurich and the University of Nouchatel. But, in 1929, Mr. Houriet left the field of chemistry to become associated with the Caribbean operations of his present concern at Ciudad Trujillo, Dominican Republic. During the next half-dozen years he served in various traffic capacities, at the end of which time he was appointed airport manager at San Juan, P. R.

Succeeding tours of duty along the Latin American routes were at Mexico City, Havana, and Port au Prince. When transatlantic flights were inaugurated, Mr. Houriet turned up on assignment at Lisbon, Baltimore, and La Guardia Field.

In 1941 the former chemist was appointed operations manager at Leopoldville, Belgian Congo. At that time Leopoldville, was a terminal for transatlantic Clipper operations inaugurated at the request of President Roosevelt—one of the results of the historic Atlantic Charter conference. Mr. Houriet was charged with the responsibility to create the airport organization which later made possible the handling of the 42-ton over-ocean Clippers with war-priority passengers and cargo at a base 344 miles up the Congo River.

TO James C. De Long, well-known New York advertising executive, now director of advertising for TWA.

Born in Indiana, De Long was graduated from the University of Michigan in 1924 and joined the American Foreign Service in Havana, Cuba. Later he served as foreign representative of the H. J. Heinz Company. In 1929 he became aviation editor of *The Financial World*.

James C. De Long

In 1934, De Long was appointed vice president and advertising director of the magazine, and served until 1938, when he became New York advertising representative of the Curtis Publishing Company. In September, 1942, he was made advertising director of the General Cable Corporation in New York, a post he held until he joined TWA this month.

TO Charles H. Huff, another man who can lay claim to having been a newspaperman once, and who has taken over the reins as publicity manager of the Farmingdale, Long Island, N. Y., plant of the Republic Aviation Corporation.

Charles H. Huff

Before coming to Republic, Mr. Huff exercised his talents with the War Production Board where he was special assistant to the New York regional director for public relations. St. Louis is his home town; and as for his newspaper record—well—he has had more than two decades' experience as editor and columnist.

TO F. G. Malbeauf on his appointment as assistant director of public information for American Airlines. He was regional director of public information for the eastern region before climbing to his new post.

TO Igor I. Sikorsky and Col. H. Frank Gregory for winning honorary fellowships to the American Helicopter Society.

TO E. J. Lyons, who, at 39, has become director of industrial relations for the Airplane Division of Curtiss-Wright, succeeding C. S. Mattoon.

The new director is a native of Colorado Springs, Colo., and is the proud possessor of a 14-year newspaper background. It was during his journalistic days that he became interested in aviation and eventually wound up as airport commissioner for the Moline, Ill., Municipal Airport.

E. J. Lyons

In March of last year, Mr. Lyons became assistant to J. P. Davey, general manager of the Columbus Airplane Division plant where the Curtiss SB2C Helldivers are produced. Prior to that assignment, which embraced industrial relations, coordinating and guiding personnel, plant security, public and internal relations operations as well as acting as a general administrative assistant to Mr. Davey, he did a chore at the Airplane Division's St. Louis plant.

TO Alvin Eager, Otto Airlines' new operations manager, who has been identified with the aviation industry for more than 20 years. Mr. Eager is a native of Los Angeles and began his aviation career by building sand yachts from parts junked by one of the major California aircraft companies. Remember the old JN-4? He took his first pilot training in one back in 1920.

Alvin Eager

The Californian has an extensive background as a pilot and flight instructor. Before the war broke out he was active in the Civilian Pilot Training program on the West Coast and was in charge of this training for students of the University of Southern California.

Also to Mr. Eager's credit are several years' experience in flight test work and the ferrying of military aircraft. Now he has assumed charge of all charter flight operations of Otto Airlines; and, at the same time, supervises the flight instruction program at the company's recently purchased airport in Blairtown, N. J.

TO Charles W. France, Curtiss-Wright vice-president and general manager of the Airplane Division, Buffalo plant, who has returned to St. Louis as general manager.

Charles W. France

The move was planned to utilize his long experience in the commercial aircraft and airline field as well as his ability to expedite production. The St. Louis plant will be the first of Curtiss-Wright's to convert to manufacture the commercial version of the Commando.

A veteran pilot, airline operator, and aircraft industry executive, Mr. France served as the St. Louis plant general manager for eight years before shifting to Buffalo last winter. At St. Louis he directed the design and development of the Model 20 transport plane, prototype of the C-46 Commando. It is the latter type that will soon be known as the CW-20.

TO N. F. Vanderlipp, factory manager of the Curtiss-Wright Columbia plant, who has been elevated to the post of general manager of the Buffalo plant.

N. F. Vanderlipp

Mr. Vanderlipp is well-known as a designer and producer of multi-engined military aircraft since World War I days. He is also expected to coordinate Navy experimental work with Columbus, which is devoted entirely to Navy production.

TO Henry H. Fitts, new PCA man direct from the Army Air Forces, assigned to Chattanooga as traffic representative.

Henry H. Fitts

Originally from Warrenton, N. C., Fitts saw many months of active service as a bombardier in a Flying Fortress in the South Pacific war zone. Among the battles in which he participated were Guadalcanal and Midway. He is a graduate of the University of North Carolina.

TO R. O. Bullwinkel, who after more than a year's work as assistant to the president of Northwest Airlines, has been named to head all traffic for the system.

R. O. Bullwinkel

Mr. Bullwinkel's appointment was in line with the recently announced streamlining of NWA's traffic department in preparation for an anticipated expansion of service. He will coordinate all activities of the traffic and sales units. Prior to his present connection, Mr. Bullwinkel was connected with the Alaskan division of Pan American Airways, the Milwaukee Railroad, Dollar Steamship Line, and Alaska Steamship Company.

TO Vern R. Mutton of Bay City, Mich, who joined Pennsylvania-Central Airlines as traffic representative in Grand Rapids after serving with the Air Transport Command of the Army Air Forces.

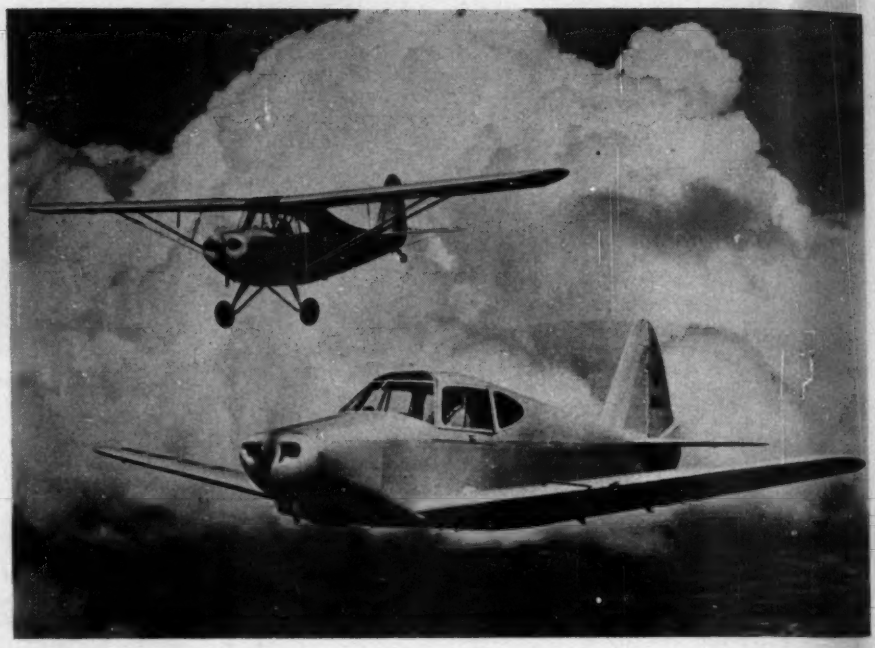
Vern R. Mutton

A navigator, he charted the course for airliners across the South Atlantic on 31 trips to North Africa. Mr. Mutton is a graduate of the Pan-American School of Celestial Navigation in California. For the past two years his wife, Erna, has been employed in the PCA medical department.

TO J. Howard Blake, formerly engaged in market research work for N. W. Ayer and Son, who has joined the Glenn L. Martin Company, Baltimore, as director of market research.

J. Howard Blake

In Mr. Blake's new job he will explore the commercial development of products outside the aircraft field. Prior to his connection with N. W. Ayer, Mr. Blake was with the Land Title & Trust Company in Philadelphia, and before that with the Administrative and Research Corporation in New York.



Sleekest of Aeronca's new offerings for private flyers in its* Arrow *(closer to camera). Above and behind it is the earlier* Tandem *model. Both put much stress on wide visibility for both pilot and passengers

New Wrinkle in Merchandising

Aeronca Aircraft Draws Parallel Between the Lightplane and the Automobile Business

A PLAN for the post-war merchandising of personal-owner type aircraft, with considerable emphasis on the rehabilitation of returned service men, has been announced by the Aeronca Aircraft Corporation, of Middletown, Ohio.

"We will show young people how to get started in the Aviation business and go as far as their energy and ability will take them," says Aeronca's credo.

The plan will be put into effect by schooling potential airfield operators and aircraft salesmen in the finer points of arousing consumer interest in small airplanes. It is intended to introduce system into these two related businesses which, too often in the past, were run in a haphazard manner with little regard for the color of the ink used on the balance sheets.

While Aeronca places emphasis on the rehabilitation of the service man, by encouraging his active participation in the

Carl Friedlander, John Friedlander and Al Bennett — vice president, president and sales director respectively of Aeronca Aircraft Corporation — discuss the shape of things to come as shown in the blueprints of Aeronca airplanes.

lightplane business, the plan will extend the advantages of the schooling also to war plant workers and others who may find themselves with irregular employment, or no employment at all, when the war is over—in keeping with the company's conviction that war-taught knowledge should not be wasted in peacetime. Correlated with that idea is the thought that a strong lightplane industry will help buttress the nation against another military emergency.

Aeronca feels that progress in lightplane flying in the postwar years will be measured by the number of airports available to the person owning or renting such aircraft. Airports, airfields, or "airparks," as the Civil Aeronautics Administration and the National Aeronautic Association have chosen to call them, give the lightplane utility. As in the automobile field, utility commensurate with cost and upkeep has the best direct sales-appeal to the consumer.

Aeronca thinks its four-passenger plane will have a tremendous market, for both business and family use

Three handbooks have been prepared for distribution: *How To Make Small Airports Pay, Why You Should Be An Aeronca Dealer,* and a third book addressed to retail buyers, *Aeronca, The Plane You'll Want To Fly.* A fourth, *The Airplane Dealer's Handbook,* is now in preparation as an encyclopedia of information for airplane dealers and small airport operators.

The first of the booklets indicates to the prospective airport owner how and where his business should be located. If a man is in doubt, Aeronca will help him scout any given territory. Company distributors will be utilized in determining the desirability of land intended for an airport. They will assist in surveying areas to obtain "airport populations," the flow of air and land traffic, the character of business in the area to determine the level of purchasing power, and the nature of the adjacent community or communities.

The airport booklet proceeds on the assumption that running an airfield, in spite of the problems peculiar to merchandising airplanes, flying lessons and air services, can be reduced to the same principles as apply to selling shoes or automobiles.

As a help to the novice in aviation, it makes the point that decentralization will be a major factor in postwar planning for expansion of the lightplane market. In other words, Aeronca draws a parallel between the automobile and lightplane businesses, in that the distributor and dealer proved to be the backbone of the automo-

tive business and were so recognized by the more successful manufacturers.

Much of the Aeronca postwar plan is concerned with promotion work—whetting the appetite of the public for flying and airplane ownership, and soliciting the support of town dignitaries for airport operation and airplane sales.

Aeronca also has been able to make available through a group of some of the largest mutual insurance companies an insurance plan which will affect a very substantial saving in insurance premiums to future purchasers of Aeronca airplanes. Aeronca has long felt that aviation insurance rates have been excessive.

To get traffic directed to an airport, the mayor, newspaper editors, radio commentators and other influential citizens should be invited to the airport and given a ride, according to the plan. News and feature material should be supplied to the newspapers and radio stations. The airplane dealer should volunteer to fly reporters on assignments. He should cooperate with the local radio station whenever aviation atmosphere is needed for a broadcast. One of the cardinal principles of an airport operation, Aeronca says, is remaining on call for emergency work—it is the duty and privilege of a dealer to cooperate with doctors and hospitals, to fly serum to outlying communities whenever the occasion arises.

Schools provide the dealer with an excellent medium of promotion, and Aeronca in its booklet tells how to obtain the best results from working with public and private educational facilities.

***All ready for quantity production the moment the Government gives the green light is Aeronca's* Chief**

Aeronca encourages the exhibition of aircraft, particularly when new models are available, but it is not in the book to countenance the air show that takes on the flavor of the daredevelish "flying cirus" of yesteryear.

Part and parcel of the Aeronca plan is to improve the design of personal aircraft. Its planes will be easy to fly, streamlined and efficient, comfortable and faster for the horsepower output than planes available in the pre-war years. Their range will be considerably increased. The new models will be available as soon as conditions permit. The company is now engaged, as it has been for several years, on war work.

149-Passenger Plane Is Planned by PAA

Details of a new mammoth transport plane, weighing ninety-two tons and capable of carrying 149 passengers, were disclosed this month by Pan American World Airways in exhibit data prepared for the Civil Aeronautics Board's joint hearing on North Atlantic route applications.

Known as PAA type 10, the aircraft is designed for a range of 3,500 miles and cruising speed of 288 miles an hour using only 64.3 per cent of normal power at 25,000 feet altitude.

Pennsylvania-Central Shortening Its Symbol To Just Plain PCA

On October 1 a new insignia was adopted by Pennsylvania-Central Airlines and will introduce a new policy of identification.

The second oldest commercial air transport organization will be known henceforth to the air traveling and shipping public as just "PCA," President C. Bedell Monro explains. Present insignia of the company will be supplanted by a new identifying design which will be inscribed on the *Capitaliners*, on company offices and facilities and in advertising. In this new design the initials PCA, tilted in the direction of flight, will be emphasized on a winged background with an accompanying slogan, *The Capital Airline.*

Promoting Good Friendship

***GOOD NEIGHBOR POLICY**—Aerovias Guatemala Air Lines has been airfreighting a large variety of native commodities from Guatemala City to New Orleans, from which point they are distributed throughout the United States. W. C. Burks, mail and cargo traffic manager, is shown exhibiting some of the merchandise of W. R. Herstein, former president of the Memphis Chamber of Commerce and now director of the newly created Memphis International Center—one of the 18 created by the Office of Co-ordinator of Inter-American Affairs.*

REA AIR SHIPMENTS UP

Air express shipments handled through La Guardia Field in September marked up a gain of 21.5 per cent over September, 1943, according to the Air Express Division of Railway Express Agency. There were 58,728 shipments handled by the agency for the domestic airlines serving the municipal airport, compared with 48,336 shipments September a year ago. Gross revenue of this airborne express traffic exceeded $279,500 for the month, a gain of 33.7 per cent, the report indicated.

Hughes Acquires TWA

Acquisition of control of Transcontinental & Western Air, Inc., by the Hughes Tool Co. of Houston, Texas, owned by Howard R. Hughes, was authorized by the Civil Aeronautics Board this month.

The announcement said Mr. Hughes, aeronautical engineer and record-holding aviator, first became interested in TWA in 1939, when he began purchasing blocks of the company's stock. At the time of the application he was represented as owning in excess of $5,505,000 of TWA's stock.

"There is very little room to doubt that for all practical purposes such control (of the company's stock) has existed since the end of 1940, at least when 42.1 per cent was owned," CAB said.

New Service By AA Airfreighter

A new service was inaugurated by American Airlines this month when the first plane carrying only freight took off from LaGuardia Field, New York.

Part of the 6,000-pound cargo was luxury products shipped by New York merchants. Charges were as low as 30 cents a ton mile; express rates 80 cents. It was pointed out by the merchants that even the lower rate was higher than for other means of transportation, but they added that this was compensated for by getting the goods to market quickly.

The plane flew from New York to Burbank, Calif., making a number of stops in between. Among the manufacturers shipping goods on the airfreighter were Saks-Fifth Avenue; I. Miller & Sons; Dorothy Grey, Ltd.; Labtex Fabrics; and the Cavendish Corporation.

H. Arthur Dunn has announced his resignation from the Government service. He has organized his own firm, H. Arthur Dunn and Associates, with offices at 1915 16th Street, N. W., Washington, D. C. The new firm acts as a specialist in assisting the negotiation for the disposal of surplus war materials.

Lt. Col. Charles B. Whitehead, until recently on active duty with the United States Army Air Force, has been appointed South American representative of the Sterling Engine Company of Buffalo. He is expected to visit cities in Brazil, Peru, Chile, Venezuela, Colombia, Ecuador, and Bolivia.

The B-29 Superfortress will soon have a sister ship to be known as the Dominator. It is Consolidated-Vultee B-32. The Army is expected to release details before 1944 rings out.

In his contention that domestic lines know how to operate profitably on overseas routes, Jack Nichols, vice president of Transcontinental and Western Air, pointed out that TWA has completed more than 5,000 Atlantic crossings.

It has been reported that Manatee County, Fla., is planning to use an airport completed by the Army during the war to fly its citrus fruits and fresh vegetables to market as rapidly as possible.

The Army is planning to turn over "a considerable number" of C-47 transport planes to commercial airlines immediately after V-E Day. Of the 158 planes taken from commercial lines, 116 have been returned.

When V-E Day comes, the Army will terminate production on 10 of its present 20 models. Work on three brand new planes will be expanded. The 10 types still required by the Army will receive production cuts in varying degrees.

Foreshadowing the air lanes of tomorrow is the new transport route linking the Marianas and the Admiralty Islands in the Pacific—right over the heart of the Japanese-held Carolines.

Only a few weeks ago it was revealed by the War Department that a pioneer flight had been made by C-47 sky-train transports over a 2,000-mile round trip route. Since that time other flights have been made.

When the international civil aviation conference is held in this country next month, Eire will be one of the countries participating. One of the main discussions will be on a plan for provisional world air routes outside the war areas during a transitional period.

The Delta Air Lines has already in operation four new flights. These consist of a third round-trip between Atlanta and Cincinnati, and a fifth round-trip between Atlanta and Dallas-Fort Worth.

Those displaying a marked interest in the CAB hearings on applications for certificates of convenience and necessity to operate commercial airlines between various points in the United States and Central and South America are Houston; San Antonio; Massachusetts; Greater Miami Port Authority; Kansas City; Tampa; Tulsa; Charleston, S. C.; South Carolina Aeronautics Commission; Board of County Commissioners of Pinellas County, Florida; Port of New York Authority; New Orleans Airport Commission; Public Counsel of Civil Aeronautics Board; Department of Interior; Department of Justic; W. R. Grace and Company; and the Maritime Commission.

Lawrence D. Bell, president of Bell Aircraft Corporation, is sure that sometime in the future jet propulsion will be used in bombers, transports, and helicopters. His company manufactures the P-59A Airacomet.

According to William Burton, Sr., Pan Am's representative in Bermuda, the line is planning to service Bermuda with four-engined land planes carrying 108 passengers within two years after the war.

American President Lines, Ltd., has applied for permission to fly passengers, cargo, and air mail from Los Angeles and San Francisco to Honolulu, Midway, Tokyo, Shanghai, Hong Kong, Manila, Batavia, Bangkok, Rangoon and Calcutta.

An Associated Press dispatch states that Iberia Company has been awarded a monopoly in Spain by the Franco Government. The company, which is state-owned, plans to place 25 per cent of the stock in the hands of Spaniards. Preference of purchase goes to Spanish shipping companies.

It has been reported that the British and continental nations have organized International Air Traffic Operators. Foreign orders of United States commercial planes will be equally as large as domestic airline orders.

A Michigan dealer has come up with a bright idea. Once each month he auctions off used planes. The first such sale—70 trainer and small passenger planes were involved—brought from $525 to $3,000 each.

In Detroit a used-plane lot will soon be opened to operate in connection with a used-car business.

Keep Your Plant's Quota "OUT FRONT!"

Victory depends upon materials as well as men! To keep our American forces "closing in," every manufacturer here at home must keep on making "Out Front" Bond Quotas!

This calls for action now on every point in the 8-Point Plan to step up Payroll Deductions. For instance, have you a 6th War Loan Bond Committee? Selected Team Captains yet? If so, have you instructed them in sales procedure—and given each the Treasury Booklet, "Getting the Order?"

How about Bond quotas for departments—and individuals? Assigning responsibilities is vital, too! Have you appointed "self-starters" to arrange rallies, competitive progress boards and meeting schedules? Are personal pledge cards printed and made out in the name of each worker? How about resolicitation near the end of the drive? Your State Payroll Chairman is ready with a detailed Resolicitation Plan. And, have you contracted for space in all your advertising media to tell the War Bond story?

Your positive Yes to all points in this forward-to-victory 8-Point Plan assures your plant meeting an "Out Front" Quota.

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